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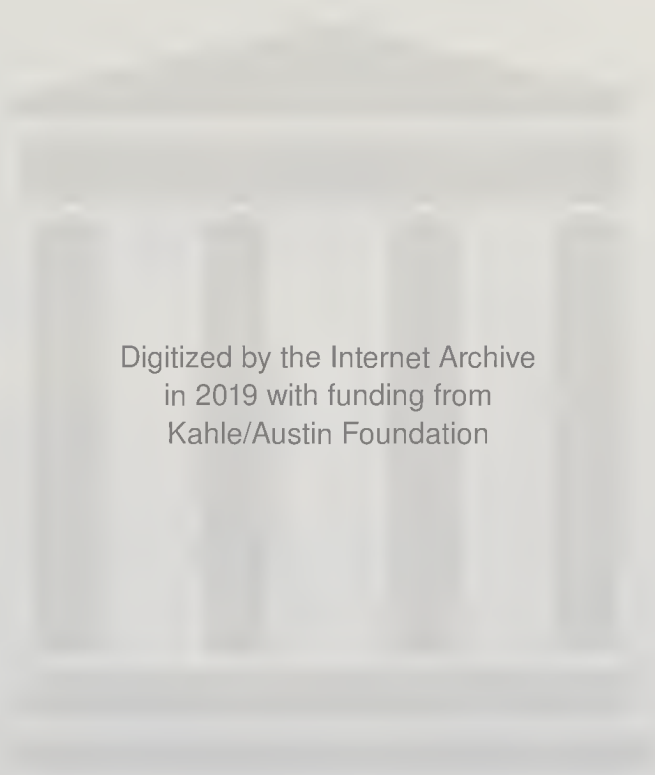

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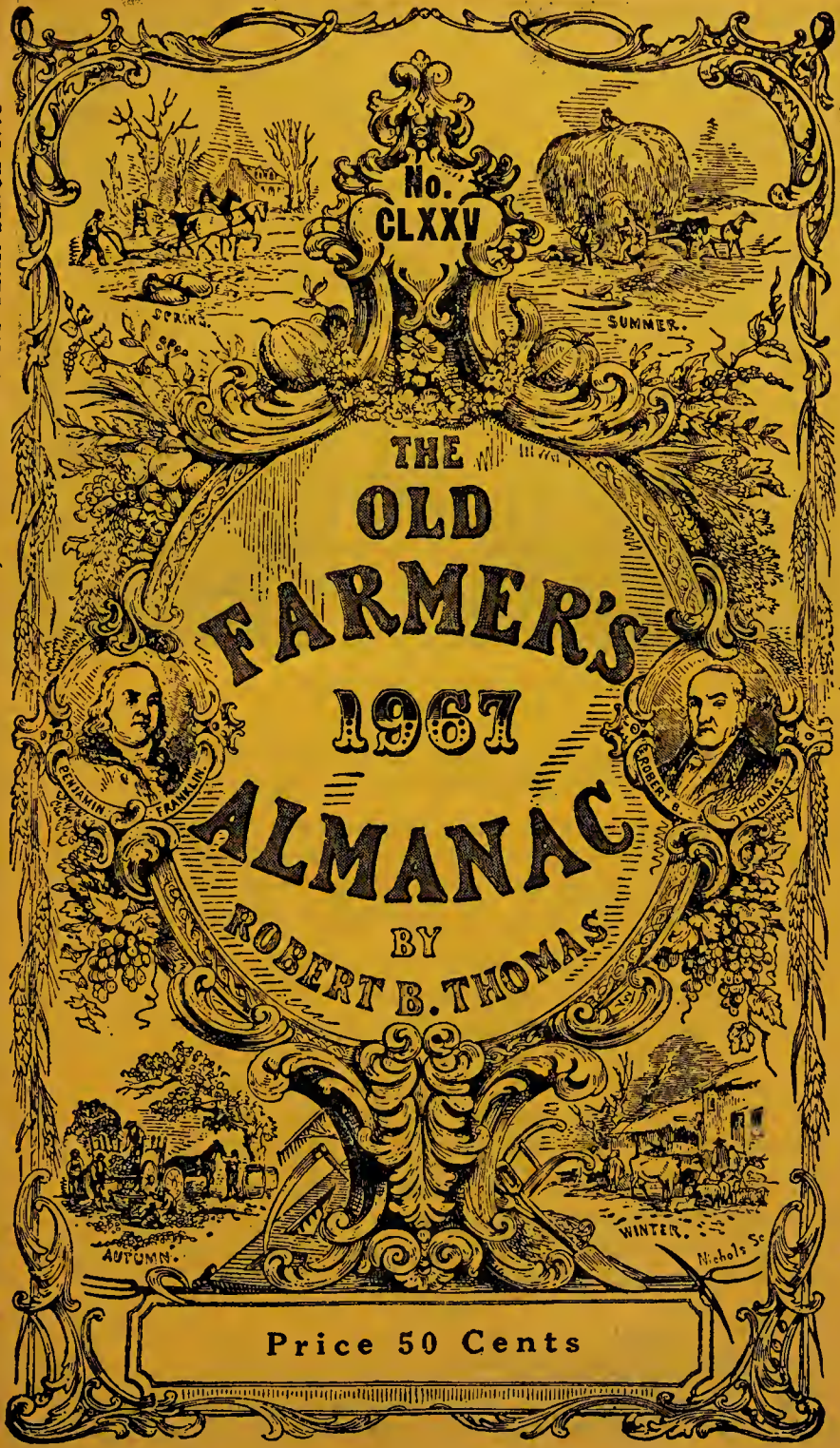

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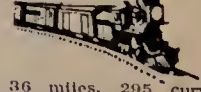

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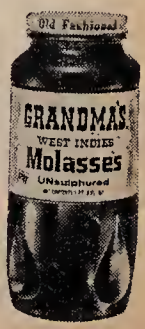

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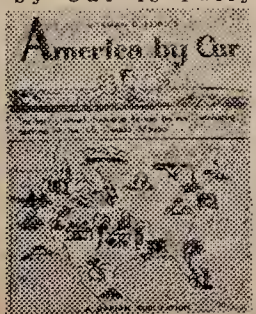

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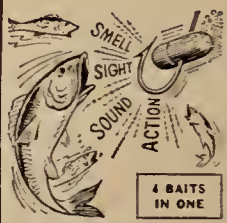

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175TH ANNIVERSARY NOTES, 1792–1967

Robert Bailey Thomas, the founder of **The Old Farmer's Almanac(k)**, was born at Grafton, Massachusetts on April 24, 1766 at the home of his maternal grandfather. He was the elder son of William and Azabah (Goodale) Thomas. His father owned a farm in West Boylston near the source of the south branch of the Nashua River. Robert and his brother, Aaron, did the usual farm chores assigned to boys of that time, and in the winter attended District School. In the summer they were instructed by their father, an eminent scholar, extensive reader, and owner of a large library. It was in this library the young Robert became absorbed in James Ferguson's **Astronomy** — to which he ascribed, in later years, his interest in publishing an almanac.

Robert taught between the ages of 20 and 26 in no less than nine different schools in the towns of Princeton, Sterling, and Boylston, Massachusetts. In his spare time, he occupied himself with mending old books and selling bound volumes (which he made up from sheets) of school books to storekeepers and school teachers.

In the year 1792 he placed himself in Boston under the charge of Osgood Carleton for instruction "in required studies." Carleton, a native of Alstead, New Hampshire, helped the young man in the preparations for the calculations of an almanac for 1793 — the first in this series which is now in its 175th consecutive year. In the early 1800s, Robert married Hannah Beaman and continued to live at the old homestead, working on the almanac in the winter and farming in the summer.

During his life he lived in four different towns, yet always lived on the same farm. The last town was West Boylston, where he served as Town Clerk, Selectman, Justice of the Peace, State Constitution delegate, and in the General Court (1833-7). After a brush with smallpox inoculation, which he declared to be "worse than the disease itself," he died on May 18, 1846. He is buried in the Old Legg Burying Ground in Sterling. Few editors of any generation have served as many continuous editorial years (54) as did the venerable Robert B.

There are four extant portraits of Mr. and Mrs. Thomas — painted presumably around 1830. Two of these are in the American Antiquarian Society in Worcester and two, acquired from Paul Parker of Rowley, Massachusetts are in the office of Yankee, Inc., publishers of this almanac in Dublin, New Hampshire. Mr. Parker stated he inherited these from his grandmother who had inherited them from her great aunt, Hannah Beaman Thomas, Robert's wife, who died in 1855. With these last-named portraits are also a kerchief made by Hannah for her husband, his drawing instruments, and some hatboxes covered by Hannah with either despoiled or unsold pages of her husband's almanac.

There have probably been more newspaper articles, magazine stories, and releases published about **The Old Farmer's Almanac** than there have been about any ten other publications. Harvard professor, George Lyman Kittredge, wrote a 400-page book, **The Old Farmer and His Almanac**, about it (William Ware & Co.) in 1904. Ives, Washburn, Inc. published a 300-page anthology of it, edited by Robb Sagendorph, entitled **The Old Farmer's Almanac Sampler**, in 1957. Radio and television have not overlooked its merits either.

To orient one's self to the times in which Robert B. Thomas lived, one must remember the boundaries (1785) of the United States extended only from the island of St. Croix, along the St. Lawrence at latitude "forty and five" and eventually to the Mississippi River, then south to latitude "thirty and one," thence easterly to "Apalachicola," north to the month of the Flint River, and northeasterly back again to St. Croix. In 1792, the cornerstone of the White House was being laid. George Washington was president.

In his Preface to his first edition, Robert B. Thomas asked "should there be anything in it that may appear of small moment, it is hoped the **literati** will excuse it." And — "As to my judgement of the weather, I need say but little for you will within the year's time, without any assistance of mine, discover how near I have come to the truth."

There followed short paragraphs on Curing a Pimpled Face, Curing Corns, Curing Tooth-ache, Removing Small Pox Spots and the Annual Meetings of the Friends. After the 26 calendar pages of astronomy and delightful Farm Calendars, one finds How to Make Butter, Rules for Long Life, an anecdote about Lafayette, Courts, Animal Disease Cures, Aphorisms, Memorable Dates, Puzzles, Anecdotes, College Va-

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Continued from page 8

cation Dates, The Bible Dissected, Table of Interest, Stage Coach Roads and Taverns, and the first article ever published in America on the persecution of the Jews. The price was sixpence single, 4 shillings per dozen. The print run on an up-and-down press (hand made rag paper) was 3,000 copies. Perhaps most interesting of all its contents are the Farm Calendars in this first edition. "Remember your bees," continues the January one, "and if weak, feed them with cakes made from malt flour, mixed up with sweet wort, or give them brown sugar: and once in a while salt and water, to keep them from scouring."

As is often the case with life itself, the fame of Robert B. Thomas as an almanac maker was established, if hearsay be correct, not by his learning, strong style, or accuracy, but by chance. It seems that in the spring of 1815, he was taken severely ill with the influenza. His Boston printers sent a boy to his bedside in Sterling to ask for the July weather forecast. "Go away — go away," he told the boy. "Don't disturb me. Tell the printer to print anything he wishes." The printer took Mr.

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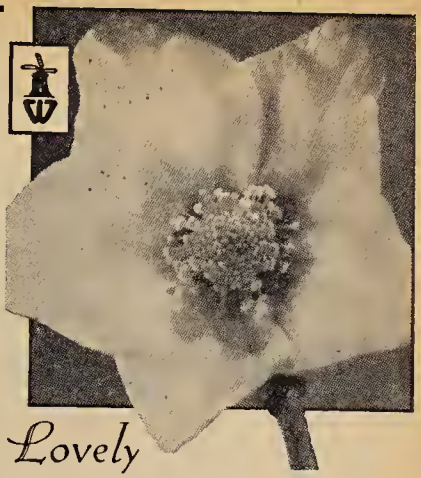

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Continued from page 9

Thomas at his word and set the following for July 13, 1816, **Rain, Hail, and Snow.** When Mr. Thomas recovered, he was furious and tried to call in every single printed sheet. However, a few escaped, and when it did rain, hail, and snow on that day, his almanac moved into the supremacy it has held ever since. Apocryphal as this story may be, reference to it in print has appeared on and off since 1832, the year in which Mr. Thomas added the word "Old" to his title.

And though I take to city life,
I'm lonesome after all,
For that old yellow almanac
Upon my kitchen wall.

(Ella Wheeler Wilcox, 1888-1919)

The old yellow cover to which Mrs. Wilcox referred has appeared as an integral part (and identification of) **The Old Farmer's Almanac(k)**, along with its hole in the corner which was there from the beginning, since 1851. It was designed by the famous wood engraver, Henry Nichols, in 1849. George Nichols, Henry's son, wrote us from Buffalo in 1949 that it was first used on the edition of 1851. Hammatt Billings, the eminent designer of the Pilgrim Monument at Plymouth, had improved some years

Continued on page 141

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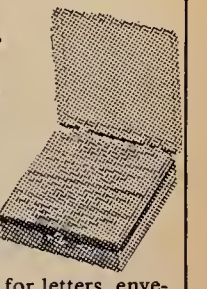
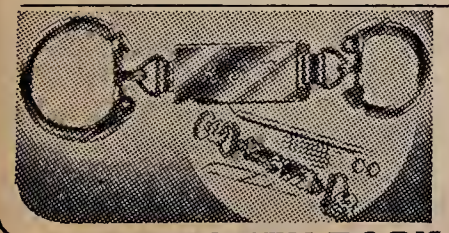


Add real distinction to your unprinted stationery. Your name and address are beautifully imprinted in black ink on gold-colored labels, 2" x ½". Fast-sticking gummed-back paper in handy pad form. Great for letters, envelopes, postcards, records, checks, books, etc. Come in clear-plastic, re-usable snap case. 500 for $1.25.

NOTE: Stationery and Label imprinting limited to 4 lines of 30 characters each.



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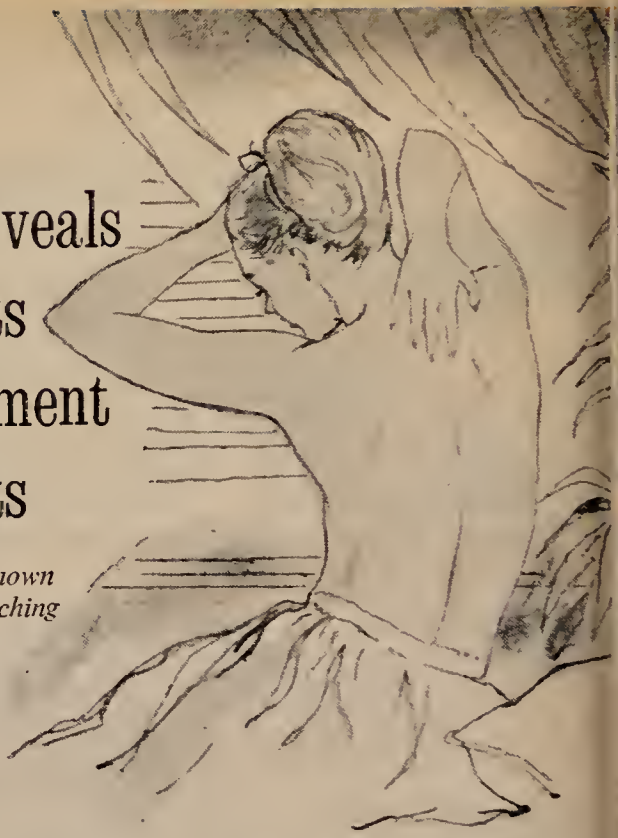

Science Reveals New Facts about Liniment Benefits

One of man's best known treatments for tired, aching muscles receives new confirmation of effectiveness from modern medical research

PROBABLY the first treatments for sore, stiff muscles caused by overexertion was massage. Through the ages, man tried various combinations of tinctures, unguents and oils to improve the effectiveness of massage.

Absorbine Jr., a special combination of relief-giving medications, proved to have a most remarkable relief effect when massaged on tired, aching muscles.

While medical science has always known the beneficial effects of liniment massage, only recently, through the miracle of electronic research, have scientists actually been able to measure many benefits of the special Absorbine Jr. formula.

A leader in bio-medical electronics, using scientific procedures, proved that Absorbine Jr. brings back fatigued muscles twice as fast as nature can. Even without massage, the application of Absorbine Jr. doubled the speed of recovery of fatigued muscles.

Many people are not aware this unique liniment actually treats the cause of sore, tired muscles. They "just sit and ache" or resort to pills in the hope of masking pain.

Now science confirms the beneficial effects of Absorbine Jr. No longer is it necessary to "just sit and ache." The new Pres-O-Matic applicator makes it easy to use. Just rub on clean, refreshing liquid Absorbine Jr. and see how much faster you feel better.

Your Quincentenary Cards
1467-1967

The color print which appears on the next page and the one on page 135, are reproduced from a hand-inscribed *Book of Hours* made in Southern France in the 15th century A.D. This *Book of Hours* was used as a prayer book and the first pages of it, with a listing of holy days, are much like an ancient almanac. The text, all hand-lettered, was drawn (page by page) by French peasant women — piece rate — for around 10¢ per page. There are about eight colored scenes — similar to these two — also made by hand. The pigments used were ground up snail shells gathered along the shores of the Mediterranean Sea — and gold powder. The book was hand made despite the invention of printing, because the printers of that century were not using the St. Gerome version of the Bible which the readers of Southern France insisted upon having. It was eventually carried to England. There it belonged to a younger son of distinguished parentage. During the Great Plague of London (1666), in which three-fourths of the citizenry was wiped out, this younger son replaced one of the illustration pages with one dedicated to the Saint who at that time was thought to protect individuals against the Plague. The younger son survived — but wishing no more of that kind of trouble, and, having no inheritance because he was a younger son, he came to America with this *Book of Hours* as almost his only possession. Some years later (1790), it was purchased by James Farmer, publisher of a New England farm magazine. In the 1920's it was among the possessions of a friend of Calvin Coolidge. Upon the farmer's death, through unintentional carelessness, this Book, along with several prints by Raphael and other treasures, was carried to a dump and placed in a pile to be burned. As the flames were returning these irreplaceable works of art to ashes, a dump attendant kicked this Book from the fire, took it home, and eventually offered it to me. I had it evaluated by the Morgan Library in New York and paid him for it at the appraised value.

I have included these two prints in this Anniversary Edition, inasmuch as I feel all readers of this ALMANAC should have them — and thus become participants in this extraordinary chain of almanac history stretching back to before the discovery of America.

These prints are available on 4¼" x 6" postcard stock, suitable for Christmas, Easter, Birthday, Anniversary, or other use. Exclusive with us, and with you, they are not available from any other source (see Page 136).

R. S.

Lord, Thou shalt open my lips, and my mouth shall show forth Thy praise.

THE
(OLD)

FARMER'S ALMANACK,

CALCULATED ON A NEW AND IMPROVED PLAN
FOR THE YEAR OF OUR LORD

1967

Being 3rd after BISSEXTILE or LEAP YEAR, and (until July 4)
191st year of American Independence

FITTED FOR BOSTON, AND THE NEW ENGLAND STATES, WITH SPECIAL CORRECTIONS AND CALCULATIONS TO ANSWER FOR ALL THE UNITED STATES.

→ NEW THIS YEAR: INDIVIDUAL SECTIONS FOR THE NORTH CENTRAL, MIDWEST, WEST, AND SOUTHERN STATES.

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NEW, USEFUL, AND ENTERTAINING MATTER.

ESTABLISHED IN 1792

BY ROBERT B. THOMAS.

"While the bright radient sun in centre glows,
The earth in annual motion round it goes:
At the same time on its own axis reels,
And gives us change of seasons as it wheels."

(The above verse appeared on the title page of Vol. 1, No. 1 (1793) of this Almanac.)

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Last Winter's Weather

(Nov., Dec. 1965 — Jan., Feb., Mar., Apr. 1966)

In the 1966 Edition of this Almanac, Page 5, Abe Weatherwise suggested that the six winter months above would average 33.67°, or about 3.5° below normal. At Blue Hill, near Boston (for which this forecast was made), the temperature averaged 34.1°. Abe also predicted 31.11" of precipitation (5.86" above normal). The actual precipitation was only 17.79". For snow, Abe foresaw 91" — and at Blue Hill it did snow 74".

Abe's "day-to-day" forecasts ran 50% correct in November, 61.8% in December, 83.3% in January, 73% in February, 62% in March, and 53% in April. For the period as a whole, his day-to-day were 63.9% correct. If one were to allow him the benefit of one day for each Time Zone West, as per Instruction 2(c) on Page 5 of the 1966 Edition, his average would run about 10% better.

It will be noted, however — and Old Abe is considerably upset about this — his precipitation prediction for these winter months was way off. He was all right on the snowfall (82% correct), but on the total precipitation he expected 31.11" and only 17.79" fell. In April, the rain was only 34% of normal. In the Northeast, the best that can be said is that the water situation was far better (100%) than it was in April 1965; but in April 1966 only half as good as it should normally be. More about this on Page 92.

January was an abnormally cold month everywhere except New York and New England. Skiers enjoyed a record 180 day season in Northern New England. As usual the seven stations (Boston-Lee, Mass.) along the Mass. Turnpike reported different climates for each station. Boston reported 14 storms this year for a total depth of 52½" of snow whereas Lee had 25 for a total of 87 inches. 19064 tons of salt, states Maintenance Engineer Hyland, were used against 16690 the year before — only 3492 tons of sand against 20634 the year before, and 768 tons of calcium chloride in comparison with 445 in 1964-65.

SUMMARY

November 1965

10-14, heavy rain, Hawaii. 15-18, rain Calif., snow Mont., Dakotas, to Great Lakes and No. New Eng., torn. Ohio. 21-24, rain Calif., hot Tex.—Mo., snow Col.—Mich. 26-30, cold Col. & Tex., gales—blizzards Midwest, snow Pa.—No. New Eng.

December 1965

4-6, fog Utah, rain Tex. 10-17, fog Miss.—E. Coast, rain Tex. & Puerto Rico. 11-17, snow New Eng., rain La., cold N.M. & Ariz. 22-24, floods Ariz., rains Ill. 25-31, heavy snow Fairbanks, Alas. 28, rains-gales West Coast, Ariz. 25-31, floods Ohio. 26-28, snow, ice Midwest.

January 1966

1-6, heavy rain West Coast, some snow. 3-6, snow East, rain Calif. 7-9, snow & gales East Coast. 16-23, cold exc. East. 15-31, cold Midwest, South. 20-29, rain South. 19-21, snow NYC. 22-24, No. East storm, 9-17" snow. 26, rec. snow N.C. 29-31, cold east of Rockies, blizzard conditions Atl. Coast. 60" snow Oswego-Syracuse, N.Y. Worst storm in 30 yrs. Dakotas—Ill., freezing cold in So. Record snowfall this month in Worcester, Syracuse, Rochester, Burlington (Vt.), Virginia.

February 1966

1-2, cont. of Jan. storm. 6-7, cold in Fla. 13, rain NYC, some snow New Eng. 24-26, Atl. Coast 14-16" snow.

March 1966

2-5, worst storm USWB history, Rockies—Great Lakes, torn. Miss., 31 below Wyo. 12-13, 5" snow East. 21-23, blizzard Col.—Gt. Lakes, cold Tex., Ala., Ga., some snow in East.

April 1966

4, torn. Fla. 5, floods N. Dak. 12, torn. Midwest. 13, bad storms at sea (Michelangelo damaged). 18-20, dust storm Tex., blizzard Wyo., torn. Mo.—Ill. 22, cold Utah. 27, 22" rain No. Tex., storm Lake Erie, Ohio, Mich. 28, cloudburst Tex.

DEGREE DAYS

"Degree Days" is a term which has come into use in recent years to designate the number of degrees the average temperature falls below 65°. For example: if the mean temperature for a given day is 46°, then that would be a 19 degree day. These degree days are added together as the heating season progresses so that for Boston the annual total runs from 6046 (1952-3) to 7161 (1955-56). Newspapers usually carry these degree day totals from day to day. (Midwest fuel bills in January 1966 were 25-40% above normal.)

Weather Forecast 1966-7

The forecast which follows herewith is for Boston only. It is based (for reasons of verification) at a 12" square spot at the summit of Blue Hill, a few miles south of Boston, latitude 40°13' N, longitude 71°07' W, elevation 629 feet.

The verses in italics running down the right-hand calendar pages (pages 25 to 46) correspond exactly to these forecasts here, and cover the periods indicated by the beginning and ending of each verse.

For areas outside of Boston, this almanac carries this year for the first time separate weather forecasts. These appear elsewhere as indicated:

New England (except Boston) — page 91
Eastern States (except New England) — page 93
Midwestern States — page 97
Western and Mountain States — page 103
Southern States — page 109

As all of these forecasts, including the ones for Boston, are based, for verification purposes, at established U.S.W.B. Stations, the temperature will be about 5° higher for each 100 miles south of the U.S.W.B. Station location given on the above-mentioned pages and 5° lower for each 100 miles north. For each 1,000 feet of altitude, reduce temperatures approx. 3°.

THE YEAR — AT BOSTON

(January 1–December 31, 1967)

The year (Jan.–Dec.) 1967 will bring a total of 50.9" of precipitation. This is 3.37" above normal and, except for the months of February and March, shows a surplus of rain each month. The average temperature will be 49.5° (or about one-half of one degree) above normal. However, January and October are below normal and April, well above normal, indicates an early, warm Spring.

THE WINTER

(November 1966–April 1967)

Almost every indication points to a higher snowfall than in either last Winter or the one before. In fact, Abe Weatherwise expects some 89" — almost 30" above average. The Winter precipitation will be 27" — about 1.5" above normal, and the average temperature 35° — which is one-half of one degree above normal. December, January, and February (this does not happen very often) will keep ploughs and shovelers "on the run."

THE FOURTEEN MONTHS

Nov. (1966): Temp. 42° (normal). Prec. 5.5" (normal 4.53"). Snow 5" (normal 2.16").

1–3, clear and cold; 4–7, 1.5" rain; 8–10, clear; 11–13, rain (1") turns to snow (1"); 14–19, mild and nice; 20–23, northeast storm (1.5" rain); 24–25, clear; 26–30, coastal storm, 1.5" rain, 4" snow.

Dec. (1966): Temp. 33° (normal 30°). Prec. 5" (normal 4"). Snow 15" (normal 12.7").

1–2, clear; 3–5, rain (1"); 6–8, cold gale; 9–11, rain (1") and fog; 12–13, clear; 14–15, rain (1"); 16, clear; 17–19, prec. 1", snow 5"; 20–25, clear; 26–28, prec. 1", snow 10"; 29–31, overcast.

Jan. (1967): Temp. 23° (normal 27°). Prec. 5" (normal 4.5"). Snow 30" (normal 14.9").

1–2, clear, 3–4, prec. .5", snow 5"; 5–7, clear; 8–10, prec. 1", snow 5"; 11–14, clear, cold; 15–17, prec. 1.5", snow 5"; 18–20, cold; 21–22, thaw; 23–24, prec. .5", snow 5"; 25–26, clear; 27–29, prec. 1.5", blizzard 10"; 30–31, clear.

Feb.: Temp. 30.4° (normal 27.4°). Prec. 3.5" (normal 3.73"). Snow 25" (normal 15").

1, clear; 2–5, prec. 1", snow 5"; 6–10, clear, milder; 11–14, prec. 1", snow 5"; 15–16, clear; 17–19, prec. .5", snow 5"; 20–23, clear; 24–28, prec. 1", snow 10".

Mar.: Temp. 35° (normal 34.8°). Prec. 4" (normal 4.84"). Snow 10" (normal 15").

1–2, prec. 1", snow 2"; 3–8, clear; 9–11, prec. 1", snow 6"; 12–16, clear; 17–20, prec. 1", snow 2"; 21–23, clear; 24–26,

Continued on page 88

ECLIPSES FOR THE YEAR 1967

There are four eclipses, two of the Sun and two of the Moon, during 1967.

I. A Total Eclipse of the Moon, April 24, 1967. This eclipse begins at 4.28 A.M.E.S.T. when the moon enters the earth's penumbral shadow. Its entry into the umbral shadow begins at 5.25 A.M.E.S.T. and the moon will be in total eclipse beginning at 6.27 A.M. The end of the total phase comes at 7.46 A.M.E.S.T. Since the moon will set for observers in the United States about 5 A.M. local standard time only Hawaiians will be able to view the entire eclipse, to its end at 9.45 A.M.E.S.T., while observers in the Pacific Standard Time zone will generally be able to observe it through its total phase. Elsewhere east of the Rockies, the moon will set while the eclipse is in an earlier phase, from the penumbral along the east co to the total phase for observers in the Mountain Standard Time belt. In its entirety the eclipse will be generally visible from locations in the Pacific Ocean and the eastern part of Asia.

II. A Partial Eclipse of the Sun, May 9, 1967. This eclipse will be visible to observers throughout the United States except Hawaii. It begins at 7.37 A.M.E.S.T. and ends at 11.47 A.M. The time of greatest eclipse is 9.42 A.M., at which time almost three-fourths of the sun's diameter will be obscured by the moon as seen by an observer located near the Bering Strait. The further the observer lies from that point, the lesser the portion of the sun covered by the moon, so that the eclipse will be least in degree for observers near the eastern and southern boundaries of the United States, greatest for observers in the west, northwest, and Alaska, for whom the eclipse will have its beginning at or shortly after sunrise.

III. A Total Eclipse of the Moon, October 18, 1967. The region from which this eclipse will be visible in its entirety is akin to that of the eclipse of April 24th except that the moon's later setting, around 6 A.M. local standard time, extends the period it will be visible to observers in the continental United States. The moon begins its entry into the earth's penumbral shadow at 2.10 A.M.E.S.T. and into its umbral shadow at 3.25 A.M. The total phase has its beginning at 4.45 A.M.E.S.T. and its ending at 5.46 A.M. The moon leaves the umbral shadow at 7.05 A.M.E.S.T. and the penumbral at 8.20 A.M. The total phase will thus be visible to observers throughout the continental United States before the moon sets, but the closing phases only partially, though more completely the further west the observer's location. Observers within the Pacific Standard Time belt and to the west thereof will in general be able to see the eclipse through to its end.

IV. A Total Eclipse of the Sun, November 2, 1967. This eclipse, even in its partial phase, will not be visible to observers within the United States. As a total eclipse of very short duration it will be visible from a small area in the south Atlantic Ocean near the Antarctic Circle. As a partial eclipse, its visibility will range from a minimal partial eclipse for observers in southern Africa and Malagasy, through one of increasing extent the nearer the observer is thence to the South Pole, becoming a near total eclipse for observers in Antarctica.

EARTH IN PERIHELION AND APHELION, 1967

The Earth will be in Perihelion on January 2nd, distant from the Sun 91,406,000 miles. The Earth will be in Aphelion on July 5th, distant from the Sun 94,516,000 miles.

FULL MOON DAYS

	1967	*1968*	*1969*	*1970*	*1971*		*1967*	*1968*	*1969*	*1970*	*1971*
Jan.	26	15	3	22	11	July	21	9	28	18	7
Feb.	24	14	2	21	10	Aug.	19	8	27	16	6
Mar.	25	14	4	22	11	Sept.	18	6	25	15	4
Apr.	24	12	2	21	10	Oct.	18	6	25	14	4
May	23	12	2–31	20	10	Nov.	17	4	23	13	2
June	22	10	29	19	8	Dec.	16	4	23	12	2–31

Holidays

†Are recommended as "with pay" holidays—regardless of regular periods—for all commercial employees. (*) Quite generally observed. (**) State holidays only. (***) Observed some places though probably not holidays.

All dates are also included in abbreviated form on the Calendar Pages (25-47).

Jan. 1 (*†) New Year's (all) **Sun.**
Jan. 8 (**) Battle New Orleans (La.)
Jan. 19 (**) Robert E. Lee's Birthday (South)
Jan. 20 (**) Arbor Day (Fla.)
Jan. 26 (**) MacArthur (Ark.)
Jan. 30 (**) F.D.R.'s Day (Ky.)
Feb. 7 (**) Mardi Gras. (Ala., Fla., La.)
Feb. 12 (*) Lincoln's Birthday (13 States) **Sun.**
Feb. 14 (**) Admission Day (Ariz).
Feb. 14 (***) Valentine's Day
Feb. 15 (***) Susan B. Anthony
Feb. 22 (*†) George Washington's Birthday, **Wed.**
Mar. 1 (**) State Day (Nebr.)
Mar. 2 (**) Texas Ind. Day
Mar. 7 (**) Burbank Day (Cal.)
Mar. 15 (**) Jackson Day (Tenn.)
Mar. 17 (**) St. Patrick's or Evacuation Day (Boston)
Mar. 24 (**) Good Friday (Ark., Cal., Conn., Del., Fla., Ill., Ind., La., Md., Minn., N. J., N. D., Penn. & Tenn.)
Mar. 25 (**) Maryland Day
Mar. 26 (**) Kuhio Day (Haw.)
Mar. 27 (**) Easter Mon. (N. C.)
Mar. 30 (**) Seward's Day (Alas.)
Apr. 2 (**) Arbor Day (Ariz.)
Apr. 12 (**) Halifax Day (N. C.)
Apr. 13 (**) Jefferson Day (Ala., Mo., Nebr., Okla., Va.)
Apr. 14 (**) Pan Am. (Fla.)
Apr. 19 (**) Patriots' Day (Me., Mass.) **Wed.**
Apr. 21 (**) San Jacinto (Tex.)
Apr. 22 (**) Okla. Day. Arbor Day (Nebr.)
Apr. 24 (**) Fast Day (N. H.), **Mon.**
Apr. 26 (**) Memorial Day (Fla., Ga., Miss.)
Apr. 28 (*) Nat'l Arbor Day (Utah)
Apr. 30 (**) Arbor Day (Utah)
May 4 (**) R. I., Indep. Day
May 10 (**) Mem. Day (N. & S. C.)
May 14 (***) Mother's Day
May 20 (**) Mecklenburg (N. C.)
May 20 (**) Armed Forces Day
May 30 (*†) Decoration or Memorial Day (exc. 5 So. States) **Tues.**
June 3 (**) Jefferson Davis Day (Ala., Fla., Ga., Ky., La., Miss., S. C., Tenn., Tex.)
June 11 (**) Kamehameha (Haw.)
June 14 (**) Flag Day (Pa.)
June 15 (**) Pioneer Day (Idaho)
June 17 (**) Bunker Hill (Suffolk Co., Mass.), **Sat.**
June 18 (***) Father's Day
June 20 (**) West Virginia Day
July 4 (*†) Independence (all), **Tues.**
July 13 (**) Forrest's Day (Tenn.)
July 24 (**) Pioneer Day (Utah)
Aug. 1 (**) Colorado Day
Aug. 14 (**) Victory (R. I., Ark.)
Aug. 16 (**) Bennington, Vt. Bat.
Aug. 30 (**) Huey Long (La.)
Sept. 4 (*†) Labor Day (all), **Mon.**
Sept. 9 (**) Admission Day (Cal.)
Sept. 12 (**) Defender's (Md.)
Sept. 16 (**) Cherokee (Okla.)
Sept. 17 (***) Citizenship Day
Sept. 22 (***) Am. Indian Day
Oct. 10 (**) Okla. Hist. Day
Oct. 11 (**) Pulaski Day (Nebr.)
Oct. 12 (*†) Columbus (All States exc. 10)
Oct. 18 (**) Alaska Day
Oct. 24 (***) United Nations Day
Oct. 31 (**) Nevada Day
Nov. 1 (**) All Saints' Day (La.)
Nov. 4 (**) Will Rogers (Okla.)
Nov. 11 (*†) Veterans' (All States exc. 4) **Sat.**
Nov. 18 (***) Sadie Hawkins Day
Nov. 23 (**) Repudiation (Md.)
Nov. 23 (*†) Thanksgiving Day
Dec. 10 (**) Wyoming Day
Dec. 15 (***) Bill of Rights Day
Dec. 21 (***) Forefathers' Day
Dec. 25 (*†) Christmas Day (all) **Mon.**

LONG HOLIDAY WEEKENDS

Best Bets for the Long Stretch seem to be Wash. B'day (Wed.), Easter, Memorial (Tues.), July 4 (Tues.) and Thanksgiving. For Three days sure are, Fast (Mon.), Labor Day (Mon.), Christmas (Mon.) and New Years (1968, Mon.). New Year's falls on a Sun. as does Lincoln's — so you might get Mon. following these — and finally the Friday before Veteran's Day which falls on a Saturday. The weather, depending on where you live, is covered elsewhere in this Almanac.

1966

JANUARY.

S	M	T	W	T	F	S
–	–	–	–	–	–	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	–	–	–	–	–

FEBRUARY.

S	M	T	W	T	F	S
–	–	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	–	–	–	–	–
–	–	–	–	–	–	–

MARCH.

S	M	T	W	T	F	S
–	–	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	–	–
–	–	–	–	–	–	–

APRIL.

S	M	T	W	T	F	S
–	–	–	–	–	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
–	–	–	–	–	–	–

MAY.

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	–	–	–	–
–	–	–	–	–	–	–

JUNE.

S	M	T	W	T	F	S
–	–	–	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	–	–
–	–	–	–	–	–	–

JULY.

S	M	T	W	T	F	S
–	–	–	–	–	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	–	–	–	–	–	–

AUGUST.

S	M	T	W	T	F	S
–	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	–	–	–
–	–	–	–	–	–	–

SEPTEMBER.

S	M	T	W	T	F	S
–	–	–	–	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	–
–	–	–	–	–	–	–

OCTOBER.

S	M	T	W	T	F	S
–	–	–	–	–	–	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	–	–	–	–	–

NOVEMBER.

S	M	T	W	T	F	S
–	–	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	–	–	–
–	–	–	–	–	–	–

DECEMBER.

S	M	T	W	T	F	S
–	–	–	–	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
–	–	–	–	–	–	–

1967

JANUARY.

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	–	–	–	–
–	–	–	–	–	–	–

FEBRUARY.

S	M	T	W	T	F	S
–	–	–	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	–	–	–	–
–	–	–	–	–	–	–

MARCH.

S	M	T	W	T	F	S
–	–	–	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	–
–	–	–	–	–	–	–

APRIL.

S	M	T	W	T	F	S
–	–	–	–	–	–	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	–	–	–	–	–	–

MAY.

S	M	T	W	T	F	S
–	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	–	–	–
–	–	–	–	–	–	–

JUNE.

S	M	T	W	T	F	S
–	–	–	–	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	–
–	–	–	–	–	–	–

JULY.

S	M	T	W	T	F	S
–	–	–	–	–	–	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	–	–	–	–	–

AUGUST.

S	M	T	W	T	F	S
–	–	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	–	–
–	–	–	–	–	–	–

SEPTEMBER.

S	M	T	W	T	F	S
–	–	–	–	–	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
–	–	–	–	–	–	–

OCTOBER.

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	–	–	–	–
–	–	–	–	–	–	–

NOVEMBER.

S	M	T	W	T	F	S
–	–	–	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	–	–
–	–	–	–	–	–	–

DECEMBER.

S	M	T	W	T	F	S
–	–	–	–	–	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	–	–	–	–	–	–

1968

JANUARY.

S	M	T	W	T	F	S
–	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	–	–	–
–	–	–	–	–	–	–

FEBRUARY.

S	M	T	W	T	F	S
–	–	–	–	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	–	–
–	–	–	–	–	–	–

MARCH.

S	M	T	W	T	F	S
–	–	–	–	–	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	–	–	–	–	–	–

APRIL.

S	M	T	W	T	F	S
–	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	–	–	–	–
–	–	–	–	–	–	–

MAY.

S	M	T	W	T	F	S
–	–	–	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	–
–	–	–	–	–	–	–

JUNE.

S	M	T	W	T	F	S
–	–	–	–	–	–	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	–	–	–	–	–	–

JULY.

S	M	T	W	T	F	S
–	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	–	–	–
–	–	–	–	–	–	–

AUGUST.

S	M	T	W	T	F	S
–	–	–	–	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
–	–	–	–	–	–	–

SEPTEMBER.

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	–	–	–	–	–
–	–	–	–	–	–	–

OCTOBER.

S	M	T	W	T	F	S
–	–	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	–	–
–	–	–	–	–	–	–

NOVEMBER.

S	M	T	W	T	F	S
–	–	–	–	–	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
–	–	–	–	–	–	–

DECEMBER.

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	–	–	–	–
–	–	–	–	–	–	–

Introduction

STANDARD TIME IS USED THROUGHOUT THIS ALMANAC

Add 1 hr April 30, (deduct it Oct. 29) for Daylight Saving Time (see page 77)

Chronological Cycles for 1967.

Golden Number	11	Solar Cycle	16	Roman Indiction	5
Epact	19	Dominical Letter*	A	Year of Julian Period	6680

**The Dominical Letter is used instead of the usual "S" for "Sunday" by almanac makers for determining at a glance (a) the year of the almanac, (b) on what day of the week any day of the month will fall.*

Movable Feasts and Fasts for 1967.

Septuagesima Sun.	Jan. 22	Good Friday	Mar. 24	Whitsunday	May 14
Shrove Sunday	Feb. 5	Easter Sunday	Mar. 26	Trinity Sunday	May 21
Ash Wednesday	Feb. 8	Low Sunday	Apr. 2	Corpus Christi	May 25
1st Sun. in Lent	Feb. 12	Rogation Sun.	Apr. 30	1st Sunday in Advent	Dec. 3
Palm Sunday	Mar. 19	Ascension Day	May 4		

THE SEASONS OF 1967

Winter (1966)	December 22	2.29 A.M.	(Sun enters Capricornus)
Spring (1967)	March 21	2.37 A.M.	(Sun enters Aries)
Summer	June 21	9.23 P.M.	(Sun enters Cancer)
Fall	September 23	12.38 P.M.	(Sun enters Libra)
Winter	December 22	8.17 A.M.	(Sun enters Capricornus)

Names and Characters of the Principal Planets.

☉ ☼ ☺ ◐ The Sun.	♀ Venus.	♃ Jupiter.	♆ Neptune.
● ☽ ○ ☾ The Moon.	⊕ The Earth.	♄ Saturn.	♇ Pluto.
☿ Mercury.	♂ Mars.	♅ or ♅ Uranus.	

Names and Characters of the Aspects.

☌ Conjunction, or in the same degree.	☊ Dragon's Head, or Ascending Node.
□ Quadrature, 90 degrees.	☋ Dragon's Tail. or Descending Node.
☍ Opposition, or 180 degrees.	

Calendar Page Explanations and Signs

On the right hand pages you will find every now and again the symbols given above conjoined in groups of three to give you what is happening in the heavens. See Glossary, Page 119. Example: ☌♃☾ on Page 25, opposite Jan. 25 means Jupiter (♃) and the moon (☾) are on that day in conjunction (☌), or nearest to each other.

Weather Forecasts

For *Boston*, see Page 19 and the italics running down beside the Farmer's Calendars on Pages 25–47. For localities *outside of Boston*, see new Part III, Pages 91, 93, 97, 103, and 109.

Planting Tables

See Page 52. Usual planting dates as well as those *most favored by the moon* are given for most parts of the U.S.A. Favorable signs are also included. See Pages 24–46 for the days on which these occur. Also see Page 56.

Astrology Signs and Meanings

See Pages 56–59 for birth date superstitions as well as those pertaining to brush cutting, weaning, planting, marriage, etc.

Planets

See Pages 48–49. Which planet is shining so brightly for you? These pages will help you to know. Also, the configurations these planets are making with each other are given in the symbols on Pages 25–47, Astrologers as well as students of the varying strength of radio and television signals find these configurations useful.

Tides

See Pages 24–46 for the times of morning and evening high tides, Pages 25–47 for the heights of these tides. Page 112 gives the corrections needed for your locality.

Five New Regional Sections

New Part III (see Pages 91–109) corrects for specific localities *other than Boston* the times of sunrise, sunset, moonrise, moonset, and the planets.

Questions gladly answered free of charge if accompanied by self-addressed, stamped envelope mailed to: THE OLD FARMER'S ALMANAC, DUBLIN, N. H., 03444.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
1	23s.01	7	22 24	13	21 31	19	20 23	25	19 00
2	22 56	8	22 16	14	21 21	20	20 10	26	18 46
3	22 51	9	22 08	15	21 10	21	19 57	27	18 31
4	22 45	10	21 59	16	20 59	22	19 43	28	18 15
5	22 38	11	21 50	17	20 47	23	19 30	29	17 59
6	22 31	12	21 41	18	20 35	24	19 15	30	17 43

☾ Last Quarter, 3rd day, 9 h. 19 m., morning, W.
● New Moon, 10th day, 1 h. 06 m., evening, W.
☽ First Quarter, 18th day, 2 h. 42 m., evening, E.
○ Full Moon, 26th day, 1 h. 41 m., morning, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☉ Rises h. m.	Key	☉ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
1	1	A	7 13	O	4 23	C	9 10	12	2½	2½	10$^{P}_{M}$11	G	10$^{A}_{M}$49	K	VIR	20
2	2	M.	7 13	N	4 24	D	9 10	12	3¼	3½	11$^{P}_{M}$26	I	11 13	J	VIR	21
3	3	Tu.	7 13	N	4 25	D	9 11	11	4¼	4½	—	—	11$^{A}_{M}$37	H	LIB	22
4	4	W.	7 13	N	4 25	D	9 12	11	5	5½	12$^{A}_{M}$39	J	12$^{P}_{M}$00	G	LIB	23
5	5	Th.	7 13	N	4 26	D	9 13	10	6	6¾	1 53	L	12 26	F	SCO	24
6	6	Fr.	7 13	N	4 27	D	9 14	10	7	7¾	3 08	M	12 56	D	SCO	25
7	7	Sa.	7 13	N	4 28	D	9 15	9	8	8¾	4 22	O	1 34	C	SGR	26
8	8	A	7 13	N	4 29	D	9 16	9	9	9¾	5 33	O	2 19	B	SGR	27
9	9	M.	7 13	N	4 30	D	9 18	9	10	10½	6 37	P	3 12	B	CAP	28
10	10	Tu.	7 13	N	4 31	D	9 19	8	10¾	11¼	7 32	P	4 13	B	CAP	29
11	11	W.	7 12	N	4 32	D	9 20	8	11½	—	8 17	O	5 19	C	AQR	1
12	12	Th.	7 12	N	4 34	D	9 22	7	0	0¼	8 53	N	6 25	D	AQR	2
13	13	Fr.	7 12	N	4 35	D	9 23	7	0¾	1	9 21	M	7 32	E	AQR	3
14	14	Sa.	7 11	N	4 36	D	9 25	7	1½	1½	9 45	L	8 35	G	PSC	4
15	15	A	7 11	N	4 37	D	9 26	6	2¼	2½	10 05	K	9 37	H	PSC	5
16	16	M.	7 10	N	4 38	D	9 28	6	3	3	10 25	I	10 38	I	ARI	6
17	17	Tu.	7 10	N	4 39	D	9 29	6	3½	4	10 43	H	11$^{P}_{M}$38	K	ARI	7
18	18	W.	7 09	N	4 41	D	9 31	5	4½	4¾	11 02	G	—	—	ARI	8
19	19	Th.	7 09	N	4 42	D	9 33	5	5	5½	11 24	F	12$^{A}_{M}$40	L	TAU	9
20	20	Fr.	7 08	N	4 43	D	9 35	5	6	6½	11$^{A}_{M}$48	D	1 44	M	TAU	10
21	21	Sa.	7 07	N	4 44	D	9 37	4	6¾	7½	12$^{P}_{M}$19	C	2 51	N	G'M	11
22	22	A	7 07	N	4 45	D	9 39	4	7¾	8¼	12 58	B	3 59	P	G'M	12
23	23	M.	7 06	N	4 47	D	9 41	4	8½	9¼	1 47	B	5 06	P	CNC	13
24	24	Tu.	7 05	M	4 48	E	9 43	4	9½	10	2 48	B	6 07	P	CNC	14
25	25	W.	7 04	M	4 49	E	9 45	3	10¼	10¾	3 59	B	7 01	P	LEO	15
26	26	Th.	7 04	M	4 50	E	9 47	3	11	11½	5 17	D	7 43	O	—	—
27	27	Fr.	7 03	M	4 52	E	9 49	3	11¾	—	6 37	E	8 21	M	LEO	16
28	28	Sa.	7 02	M	4 53	E	9 51	3	0½	0¾	7 56	G	8 50	L	VIR	18
29	29	A	7 01	M	4 54	E	9 53	3	1¼	1½	9 13	H	9 16	J	VIR	19
30	30	M.	7 00	M	4 56	E	9 56	2	2	2½	10 29	J	9 41	I	LIB	20
31	31	Tu.	6 59	M	4 57	E	9 58	2	3	3¼	11$^{P}_{M}$44	K	10$^{A}_{M}$04	G	LIB	21

JANUARY hath 31 days. [1967

The new year opens — old is past,
Stern winter comes with its rough blast:
See the farmer shivering with cold,
Driving his flocks and herds to fold.

D. M.	D. W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	A	Circumcision • ☾ in Peri • {9.4 10.2} *Clear,*	
2	M.	♂ ☌ ☾ • Earth distant from Sun 91,406,000 mi. {9.5 9.8} *dear.*	"Cut timber if you wish it to last long, it being the best time of the year."
3	Tu.	♂ ☍ ☾ • Expect unusual Meteor Showers {9.6 9.4} *Shovel*	
4	W.	Latest Sunrises 12-29/1-10 • Tides {9.8 9.0} *trouble.*	Most true, for in January no sap runs in the trees and timber cut now is really partly seasoned before it goes to the saw. But whether January or July, the timber the old-timer cut to build his house was first-growth, and would become harder and harder with age, unlike second-field-growth or much of the tree crops today.
5	Th.	Twelfth Night • ☾ on Eq. • {9.9 8.7} *Good skating,*	
6	Fr.	Epiphany. • ♂ ☿ ☾ • {10.0 8.6} *easy*	
7	Sa.	Apollo was Born Today • Tides {10.2 8.6} *mating.*	
8	A	Ista. Ep. Battle of New Orleans {10.3 8.6} *Milder*	It is said a modern house does well if it lasts as long as the mortgage on it; which is as it should be in an economy of waste. Development houses are built for peripatetic tenants, with the expectancy that where they huddle today all will be swept away for something new tomorrow. There is no heritage in them —and rarely an honest board.
9	M.	☾ rides low *Swiftly time passes away when happiness is in the day* *but*	
10	Tu.	Arctic Snowy Owls Return • Buffalo Bill Died 1917 *wilder.*	
11	W.	Venus Eve. Star—Aug. 28 ♂ ☌ ☾ Saturn Eve. Star—Mar. 23 *Icy*	
12	Th.	This Day Parallel with Nov. 30 • {8.7 10.1} *breezes*	
13	Fr.	Marriage Best now until 22nd. • Tides {8.6 9.8} *create*	
14	Sa.	Saint Hilary "Coldest of Year" • Tides {8.6 9.5} *sneezes.*	
15	A	2nda. Ep. ♂ ☌ ☾ Tides {8.5 9.1} *Stay*	But how well we understand the worth and the meaning of this old house — its meaning to the man who was once to build it. Everything in it would be his — his timbers, his beams and boards, his labor and skill (rough though it was) to hew and fashion and make a home that would stand forever on his land for his children and their generations after them.
16	M.	☾ in Apo. ☾ on Eq. • Lucky Day {8.5 8.7} *home,*	
17	Tu.	*An oak tree's ne'er Fell'd with one blow* • ♂ ☿ ☉ Sup. *don't*	
18	W.	De-Tar Chimneys • Way Below Zero 1857 {8.4 7.9} *roam.*	
19	Th.	Jupiter 395,000,000 Miles Away (20th) • Hol. So. {8.4 7.6} *Relax*	
20	Fr.	Favorable Conc. Male Child ♂ ♃ ☉ Arbor Day, Fla. *Jack,*	
21	Sa.	Jupiter now Eve. Star • Tides {8.6 7.5} *summer's*	
22	A	Sept. S. • Gray Whales Now Migrate {9.0 7.7} *back.*	This would not be so — not for new generations — but there are still those who love an old house and seek it out. It is too old and strong to die.
23	M.	☾ runs high • "Liberty & Union Now & Forever" 1830 *Chow-*	
24	Tu.	Virgin Islands Purch. 1917 {9.9 8.4} *der of powder.*	
25	W.	Conversion of St. Paul • ♂ ♃ ☾ {10.3 8.9} *Right*	
26	Th.	The Full Wolf Moon 1.41 A.M. • {10.8 9.3} *bright.*	
27	Fr.	*He hath good judgement who relies not even on his own* *Blizzard,*	
28	Sa.	☾ in Peri. As Day Lengthens the Cold Strengthens *says this*	
29	A	Sex. S. ♂ ☌ ☾ {10.0 10.9} *wizard.*	
30	M.	John XVI Can. Uldaric 993 ☾ on Eq. {10.2 10.5} *Beware,*	
31	Tu.	♂ ☍ ☾ • Louisiana Purch. 1803 {10.3 9.9} *it's fair.*	

ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
	1	17s. 09	7	15 22	13	13 25	19	11 21	25	9 10
	2	16 52	8	15 03	14	13 05	20	10 59	26	8 48
	3	16 35	9	14 44	15	12 45	21	10 38	27	8 25
	4	16 17	10	14 25	16	12 24	22	10 16	28	8 03
	5	15 59	11	14 05	17	12 03	23	9 54		
	6	15 41	12	13 45	18	11 42	24	9 32		

☾ Last Quarter, 1st day, 6 h. 03 m., evening, E.
● New Moon, 9th day, 5 h. 44 m., morning, E.
☽ First Quarter, 17th day, 10 h. 57 m., morning, E.
○ Full Moon, 24th day, 12 h. 44 m., evening, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☺ Rises h. m.	Key	☺ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea. Boston. Morn h.	Full Sea. Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
32	1	W.	6 58	M	4 58	E	10 00	2	3¾	4¼	—	–	10$^{A}_{M}$30	F	SCO	22
33	2	Th.	6 57	M	5 00	E	10 03	2	4¾	5¼	12$^{A}_{M}$59	M	10 59	E	SCO	23
34	3	Fr.	6 56	M	5 01	E	10 05	2	5¾	6½	2 13	N	11$^{A}_{M}$33	C	SGR	24
35	4	Sa.	6 55	M	5 02	E	10 07	2	6¾	7½	3 24	O	12$^{P}_{M}$15	B	SGR	25
36	5	A	6 54	M	5 03	E	10 10	2	7¾	8½	4 30	P	1 04	B	CAP	26
37	6	M.	6 53	M	5 05	E	10 12	2	8¾	9½	5 27	P	2 03	B	CAP	27
38	7	Tu.	6 51	L	5 06	F	10 15	2	9¾	10½	6 14	F	3 06	C	CAP	28
39	8	W.	6 50	L	5 07	F	10 17	2	10½	11	6 52	O	4 13	D	AQR	29
40	9	Th.	6 49	L	5 08	F	10 20	1	11¼	11¾	7 22	N	5 19	E	AQR	0
41	10	Fr.	6 48	L	5 10	F	10 22	1	—	0	7 48	M	6 24	F	PSC	1
42	11	Sa.	6 46	L	5 11	F	10 25	1	0½	0½	8 09	L	7 26	H	PSC	2
43	12	A	6 45	L	5 13	F	10 27	1	1	1¼	8 28	K	8 27	I	ARI	3
44	13	M.	6 44	L	5 14	F	10 30	2	1½	1¾	8 47	J	9 27	J	ARI	4
45	14	Tu.	6 42	L	5 15	F	10 33	2	2¼	2½	9 05	I	10 28	K	ARI	5
46	15	W.	6 41	L	5 16	F	10 35	2	3	3¼	9 26	G	11$^{P}_{M}$31	M	TAU	6
47	16	Th.	6 40	L	5 18	F	10 36	2	3½	4	9 48	F	—	–	TAU	7
48	17	Fr.	6 38	L	5 19	F	10 41	2	4½	5	10 16	E	12$^{A}_{M}$35	N	G'M	8
49	18	Sa.	6 37	K	5 20	F	10 43	2	5¼	5¾	10 49	D	1 41	O	G'M	10
50	19	A	6 35	K	5 21	G	10 46	2	6	6¾	11$^{A}_{M}$33	B	2 48	P	G'M	11
51	20	M.	6 34	K	5 23	G	10 49	2	7	7¾	12$^{P}_{M}$27	B	3 51	P	CNC	12
52	21	Tu.	6 32	K	5 24	G	10 52	2	8	8¾	1 33	B	4 47	P	CNC	13
53	22	W.	6 31	K	5 25	G	10 54	2	9	9½	2 47	B	5 35	P	LEO	14
54	23	Th.	6 29	K	5 26	G	10 57	2	9¾	10½	4 07	C	6 15	N	LEO	15
55	24	Fr.	6 28	K	5 28	G	11 00	3	10¾	11¼	5 28	E	6 48	M	—	—
56	25	Sa.	6 26	K	5 29	G	11 03	3	11½	—	6 50	H	7 15	K	VIR	16
57	26	A	6 25	K	5 30	G	11 05	3	0	0½	8 09	I	7 41	J	VIR	17
58	27	M.	6 23	K	5 31	G	11 08	3	0¾	1¼	9 27	K	8 05	H	LIB	18
59	28	Tu.	6 22	K	5 33	G	11 11	3	1½	2	10$^{P}_{M}$45	L	8$^{A}_{M}$31	F	LIB	19

FEBRUARY hath 28 days. [1967

Bleak o'er the plain the winds do blow,
Hurls round and round the powder'd snow:
Of purest white the show'r descends,
And all its horrors winter pends.

D.M.	D.W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	W.	St. Bridget • 37 Below 1851 58 Above 1951 *Just the*	
2	Th.	Pur. of M. • Ground Hog Day ☌ ☿ ☾ {10.0 8.7 *stuff*	
3	Fr.	The Four Chaplains • Soviet Moon Landing 1966 {9.8 8.3 *ski*	
4	Sa.	Capt. Cook Killed Owhyhee 1779 • L. Braille Born 1809 *buffs*	
5	A	Quinqua. S. ☾ rides low {9.6 8.1 *luff.*	
6	M.	Shrove Monday • *He healed many that were sick of diverse diseases* *Eat*	
7	Tu.	Mardi Gras • This thunder means fine fall crops *that*	
8	W.	Ash Wed. Lent begins • J. Verne B. 1828 {9.9 8.5 *steak*	
9	Th.	Sun Dials 9–12 close to correct • Chinese New Year 1967 *up by*	
10	Fr.	World Prayer ☌ ☿ ☾ Victoria M. 1840 {— 9.8 *the lake.*	
11	Sa.	*Better ga around than fall in the ditch* ☌ ♀ ☾ *These*	
12	A	1st S. L. Linc. B'Dy. ☌ ♄ ☾ *snows a fine*	
13	M.	☾ in Apo. ☾ on Eq. Crows Around {8.9 9.1 *summer*	
14	Tu.	Saint Valentine • Sugar is sweet so are you *foreshows.*	
15	W.	Susan B. Anthony • Ember Day {8.8 8.3 *Not rowdy*	
16	Th.	Auld Deer "Worst in Year" ☿ Gr. El. E. *or cloudy.*	
17	Fr.	First ship thru Suez Canal 1867 • Ember Day {8.5 7.6 *Fires*	
18	Sa.	Year's lowest eve. high tides (18–19) • Ember Day *crackle,*	
19	A	2nd S. L. Spain ceded Florida to the U.S.A. 1821 *hens*	
20	M.	*There is no little enemy* • ☾ runs high {8.9 7.7 *cackle.*	
21	Tu.	☌ ♃ ☾ $3.00 Gold Pieces auth. 1853 now worth $60. + *Cherry*	
22	W.	Wash. B'dy • ☿ Stat. in R.A. • {9.9 8.7 *pie's in*	
23	Th.	☌ ♀ ♄ • Only foolish ladies venture forth today *the P.M.*	
24	Fr.	St. Matthias • Full Snow Moon 12.44 P.M. *sky.*	
25	Sa.	♆ Stat. in R.A. ☌ ☉ ☾ ☾ in Peri. *Wheeler-*	
26	A	3rd S. L. ☾ on Eq. {10.6 11.2 *dealer,*	
27	M.	*Small sprats aft catch great mackerel* • {10.9 11.0 *barn door*	
28	Tu.	☌ ♂ ☾ • Peacemaker expl. 1844 Tides {11.0 10.5 *sealer.*	

These three days some other months stole. A welcome theft, say we, they were too — cold.

"Now early lambs begin to drop; give them a warm bed at night, and put them in the sun by day."

There is a simplicity in these lines — almost biblical — and a thought as gentle as one may have, perhaps, of a rugged New England farm.

Lambing time. To a farm boy the calendar of the year was made up less of days than the expectancy of "times" — lambing time; ploughing and seed time; blossom time; growing and haying, and apple picking, and harvest time.

Lambing time was the first and, after the long winter, the best. At night the ewes and the lambs were penned in the barn. For bright days there were the sheep folds outside, roofed and boarded on three sides, but high open to the south and the sun. Though the eold was bitter and the snow banks were high, inside the sheds it was warm and fragrant with the smell of sheep and hay and stalk bedding — if you liked that smell. Farm boys did.

To a farm boy there was nothing "sissy" in looking after the lambs from the time of their dropping, wobbly and helpless, to their gamboling, idiot stage when they would indeed have followed him to school — or a butterfly or anything anywhere.

Onee there were thousands of sheep and lambs in our eounty. There are almost none at all now. Forests have eome baek to their pastures and grazings. The wilderness returns for a time.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
1	7S. 40	7	5 21	13	3 00	19	0 38	25	1 44
2	7 17	8	4 58	14	2 37	20	0S.15	26	2 07
3	6 54	9	4 35	15	2 13	21	0N.09	27	2 31
4	6 31	10	4 11	16	1 50	22	0 33	28	2 54
5	6 08	11	3 47	17	1 26	23	0 56	29	3 17
6	5 45	12	3 24	18	1 02	24	1 20	30	3 41

☾ Last Quarter, 3rd day, 4 h. 11 m., morning, E.
● New Moon, 10th day, 11 h. 30 m., evening, W.
☽ First Quarter, 19th day, 3 h. 32 m., morning, E.
○ Full Moon, 25th day, 10 h. 21 m., evening, E.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS—PAGE 16

Day of Year	Day of Month	Day of Week	Rises h. m.	Key	Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
60	1	W.	6 20	K	5 34	G	11 14	3	2½	3	—	–	8^{A}_{M}59	E	SCO	20
61	2	Th.	6 18	K	5 35	G	11 17	4	3¼	4	12^{A}_{M}02	N	9 32	D	SCO	21
62	3	Fr.	6 17	J	5 36	H	11 19	4	4¼	5	1 16	O	10 12	C	SGR	22
63	4	Sa.	6 15	J	5 37	H	11 22	4	5¼	6	2 25	P	11 00	B	SGR	23
64	5	A	6 14	J	5 39	H	11 25	4	6½	7¼	3 25	P	11^{A}_{M}55	B	CAP	24
65	6	M.	6 12	J	5 40	H	11 28	4	7½	8¼	4 15	P	12^{P}_{M}58	C	CAP	25
66	7	Tu.	6 10	J	5 41	H	11 31	5	8½	9¼	4 55	O	2 04	D	AQR	26
67	8	W.	6 09	J	5 42	H	11 34	5	9½	10	5 27	N	3 09	E	AQR	27
68	9	Th.	6 07	J	5 43	H	11 37	5	10¼	10¾	5 53	M	4 14	F	PSC	28
69	10	Fr.	6 05	J	5 45	H	11 39	5	11	11¼	6 14	K	5 17	G	PSC	29
70	11	Sa.	6 03	J	5 46	H	11 42	6	11½	—	6 34	J	6 18	H	PSC	1
71	12	A	6 02	J	5 47	H	11 45	6	0	0	6 52	I	7 18	J	ARI	2
72	13	M.	6 00	J	5 48	H	11 48	6	0½	0¾	7 11	H	8 19	K	ARI	3
73	14	Tu.	5 58	J	5 49	I	11 51	7	1	1¼	7 30	F	9 22	L	TAU	4
74	15	W.	5 57	I	5 50	I	11 54	7	1½	2	7 51	E	10 25	M	TAU	5
75	16	Th.	5 55	I	5 52	I	11 57	7	2¼	2¾	8 16	D	11^{P}_{M}30	O	TAU	6
76	17	Fr.	5 53	I	5 53	I	12 00	7	3	3½	8 46	C	—	–	G'M	7
77	18	Sa.	5 51	I	5 54	I	12 02	8	3¾	4¼	9 24	B	12^{A}_{M}35	P	G'M	8
78	19	A	5 50	I	5 55	I	12 05	8	4½	5¼	10 12	B	1 38	P	CNC	9
79	20	M.	5 48	I	5 56	I	12 08	8	5½	6¼	11^{A}_{M}12	B	2 37	P	CNC	10
80	21	Tu.	5 46	I	5 57	I	12 11	9	6½	7¼	12^{P}_{M}21	B	3 27	P	LEO	11
81	22	W.	5 45	I	5 58	I	12 14	9	7½	8¼	1 37	D	4 09	O	LEO	12
82	23	Th.	5 43	I	6 00	I	12 17	9	8½	9	2 56	E	4 44	N	VIR	13
83	24	Fr.	5 41	I	6 01	I	12 20	9	9½	10	4 17	G	5 13	L	VIR	14
84	25	Sa.	5 39	I	6 02	J	12 22	10	10¼	10¾	5 38	H	5 39	J	LIB	15
85	26	A	5 38	I	6 03	J	12 25	10	11¼	11½	6 58	J	6 04	I	—	—
86	27	M.	5 36	H	6 04	J	12 28	10	—	0	8 20	L	6 29	G	LIB	16
87	28	Tu.	5 34	H	6 05	J	12 31	11	0½	0¾	9 41	M	6 56	F	SCO	17
88	29	W.	5 32	H	6 06	J	12 34	11	1¼	1¾	10^{P}_{M}59	O	7 29	D	SCO	18
89	30	Th.	5 31	H	6 08	J	12 37	11	2	2½	—	–	8 07	C	SGR	19
90	31	Fr.	5 29	H	6 09	J	12 40	12	3	3½	12^{A}_{M}14	P	8^{A}_{M}53	B	SGR	20

MARCH hath 31 days. [1967

Bleak winds assault us all around;
Dances aloft, or skims the ground:
See the school-boy — his hat in hand,
While on the path he scarce can stand.

D. M.	D. W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	W.	St. David ♂ ☿ ☾ C. Swan D. 1935 *Storm's*	"Get out posts and rails and prepare them for setting."
2	Th.	Mt. Ranier Nat'l Park est. 1899 · Leo XIII b. 1810 {10.5 9.1 *warm.*	Ancient stone walls lose their identity slowly and will long remain to astonish us in the heart of the forest. Wooden fences that were more easily constructed and would more usefully serve the farmer — these have left scarcely a trace of their being. Yet for every mile of stone fence (stone walls were fences and called so) there were miles of wooden fences — post and rail, zigzag snake or worm fences, stake and rail, cross and rail (frequently the broad ground base under the X crossing of the rails were stone filled), and many variations of these. In 1883 there were six million miles of such fences, valued at two billion honest dollars, or three hundred and twenty-five dollars a mile.
3	Fr.	Canada Geese back in Canada · Comet of 1843 · {10.0 8.4 *Fine*	
4	Sa.	♂ ☿ ☉ Inf. · Beware of accidents {9.6 8.0 *& clear*	
5	A	4th S. L. · The Ides begin ☾ rides low *but*	
6	M.	Remember the Alamo 1836 · Beware of Old Colind *spring's*	
7	Tu.	Luther Burbaok born 1849 · Heavy snow Alabama 1954 *not*	
8	W.	♂ Stat. in R. A. *Closed doors more easily heard through than open ones*	
9	Th.	Maple Tree Sap Running · ♂ ☿ ☾ · {9.5 8.7 *here.*	
10	Fr.	The Easter new moon's the only one to triumph over the full. ☽ ☾	
11	Sa.	Romeo married Juliet 1302 · {9.5 9.1 *Posh, tosh,*	
12	A	Pas. S. Saint Gregory ☾ on Eq. ☾ in Apo. *slosh.*	
13	M	☽ ☉ · ♂ ♀ ☾ {9.2 9.3 *Wonderful*	
14	Tu.	Skunks mating · Great Lakes open 1951 · {9.3 9.0 *weather*	
15	W.	Andrew Jackson · Buzzards Ret. Hinckley, Ohio {9.2 8.7 *brings*	
16	Th.	*Borrowed clothes just never fit* · ☿ Stat. in R.A. {9.1 8.3 *storms*	
17	Fr.	Saint Patrick Evacuation · Day equals Night {8.9 8.0 *together.*	
18	Sa.	Worst midwest Tornadoes 1925 · Tides {8.8 7.7 *No sun,*	
19	A	Palm S. ☾ Runs high Tides {8.7 7.5 *no fun,*	
20	M.	[21st— ♂ ☌ ☿ Stat. in R.A.] {8.8 7.5 *no mon,*	
21	Tu.	Spring begins 2.37 A.M. · Sun enters Aries *no hon.*	
22	W.	Earliest possible Easter date · Oysters spawn *Made for*	
23	Th.	♂ ♄ ☉ · Saturn Morn. Star until Oct. 2 *a sun*	
24	Fr.	G. Fri. · Holiday 19 states {10.6 10.1 *tan fan.*	
25	Sa.	Annun. Lady D. ♂ ☉ ☾ Moon Full {11.0 10.8 *A beast*	
26	A	Easter D. Purim ☾ on Eq. ☾ in Peri *from*	
27	M.	♂ ♂ ☾ *What one relishes surely nourishes* *Down East.*	
28	Tu.	Plutonium 239 irradiated 1941 *March's bold lion*	
29	W.	♂ ☿ ☾ · Tenn. R. Flood 1913 K. 467 *now with*	
30	Th.	Seward's Day · Alaska Purch. 1867 {11.1 10.3 *the lamb*	
31	Fr.	Mercury Visible · ☿ Gr. El. W. {10.5 8.9 *is lyin'.*	

And there is much to consider in this. The virgin forest land became the rich cleared land that grew the crops and fed and pastured the cattle. The forest made the fence to contain the cattle and sheep, to protect the crops, to hold the farm in and, paradoxically, the forest out. In this way America grew, by devouring its creator.

Far more trees were felled to build and maintain these fences than were originally cleared for the crop and pasture lands they enclosed. At least one-tenth of a farmer's forest went into his fences, and while his house and barn once built had pretty much asked their ask, not so his posts and rails.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
1	4N.27	7	6 45	13	8 58	19	11 06	25	13 05		
2	4 51	8	7 08	14	9 20	20	11 27	26	13 24		
3	5 14	9	7 30	15	9 41	21	11 47	27	13 44		
4	5 37	10	7 53	16	10 03	22	12 07	28	14 03		
5	6 00	11	8 15	17	10 24	23	12 26	29	14 22		
6	6 23	12	8 36	18	10 45	24	12 46	30	14 41		

☾ Last Quarter, 1st day, 3 h. 59 m., evening, W.
● New Moon, 9th day, 5 h. 21 m., evening, W.
☽ First Quarter, 17th day, 3 h. 48 m., evening, E.
○ Full Moon, 24th day, 7 h. 04 m., morning, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☉ Rises h. m.	Key	☉ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
91	1	Sa.	5 27	H	6 10	J	12 43	12	4	$4\frac{1}{2}$	$1^{A}_{M}19$	P	$9^{A}_{M}47$	B	CAP	21
92	2	A	5 25	H	6 11	J	12 46	12	5	$5\frac{3}{4}$	2 13	P	10 49	B	CAP	22
93	3	M.	5 24	H	6 12	J	12 48	13	6	7	2 56	O	$11^{A}_{M}55$	C	AQR	23
94	4	Tu.	5 22	H	6 13	J	12 51	13	$7\frac{1}{4}$	8	3 31	N	$1^{P}_{M}01$	D	AQR	24
95	5	W.	5 20	H	6 14	J	12 54	13	$8\frac{1}{4}$	$8\frac{3}{4}$	3 58	M	2 06	E	AQR	25
96	6	Th.	5 19	G	6 15	K	12 57	13	9	$9\frac{1}{2}$	4 20	L	3 09	G	PSC	26
97	7	Fr.	5 17	G	6 17	K	13 00	14	$9\frac{3}{4}$	$10\frac{1}{4}$	4 41	K	4 11	H	PSC	27
98	8	Sa.	5 15	G	6 18	K	13 02	14	$10\frac{1}{2}$	$10\frac{3}{4}$	4 59	I	5 12	I	ARI	28
99	9	A	5 14	G	6 19	K	13 05	14	11	$11\frac{1}{4}$	5 18	H	6 12	K	ARI	0
100	10	M.	5 12	G	6 20	K	13 08	14	$11\frac{3}{4}$	—	5 36	G	7 14	L	ARI	1
101	11	Tu.	5 10	G	6 21	K	13 11	15	0	$0\frac{1}{4}$	5 57	F	8 17	M	TAU	2
102	12	W.	5 09	G	6 22	K	13 14	15	$0\frac{1}{2}$	$0\frac{3}{4}$	6 20	D	9 22	N	TAU	3
103	13	Th.	5 07	G	6 23	K	13 16	15	1	$1\frac{1}{2}$	6 48	C	10 27	P	TAU	4
104	14	Fr.	5 05	G	6 25	K	13 19	15	$1\frac{3}{4}$	$2\frac{1}{4}$	7 24	B	$11^{P}_{M}30$	P	G'M	5
105	15	Sa.	5 04	G	6 26	K	13 22	16	$2\frac{1}{2}$	3	8 07	B	—	—	CNC	6
106	16	A	5 02	G	6 27	K	13 25	16	$3\frac{1}{4}$	$3\frac{3}{4}$	9 01	B	$12^{A}_{M}30$	P	CNC	7
107	17	M.	5 00	G	6 28	K	13 27	16	4	$4\frac{3}{4}$	10 05	B	1 21	P	CNC	8
108	18	Tu.	4 59	F	6 29	L	13 30	16	5	$5\frac{3}{4}$	$11^{A}_{M}11$	C	2 05	F	LEO	9
109	19	W.	4 57	F	6 30	L	13 33	17	6	$6\frac{3}{4}$	$12^{P}_{M}32$	D	2 42	N	LEO	10
110	20	Th.	4 56	F	6 31	L	13 36	17	7	$7\frac{3}{4}$	1 50	F	3 12	M	VIR	11
111	21	Fr.	4 54	F	6 32	L	13 38	17	8	$8\frac{3}{4}$	3 09	H	3 38	K	VIR	12
112	22	Sa.	4 53	F	6 34	L	13 41	17	9	$9\frac{1}{2}$	4 27	I	4 03	J	LIB	13
113	23	A	4 51	F	6 35	L	13 44	17	10	$10\frac{1}{4}$	5 47	K	4 27	H	LIB	14
114	24	M.	4 50	F	6 36	L	13 46	18	$10\frac{3}{4}$	$11\frac{1}{4}$	7 10	L	4 54	F	—	—
115	25	Tu.	4 48	F	6 37	L	13 49	18	$11\frac{3}{4}$	—	8 32	N	5 22	E	SCO	15
116	26	W.	4 47	F	6 38	L	13 51	18	0	$0\frac{1}{2}$	9 51	O	5 59	D	SCO	16
117	27	Th.	4 45	F	6 39	L	13 54	18	$0\frac{3}{4}$	$1\frac{1}{2}$	$11^{P}_{M}04$	P	6 42	B	SGR	17
118	28	Fr.	4 44	F	6 40	L	13 56	18	$1\frac{3}{4}$	$2\frac{1}{4}$	— .	—	7 35	B	SGR	18
119	29	Sa.	4 42	F	6 41	L	13 59	18	$2\frac{1}{2}$	$3\frac{1}{4}$	$12^{A}_{M}05$	P	8 36	B	CAP	19
120	30	A	4 41	E	6 43	M	14 02	19	$3\frac{1}{2}$	$4\frac{1}{4}$	$12^{A}_{M}54$	P	$9^{A}_{M}43$	C	CAP	21

APRIL hath 30 days. [1967

Now cast around thy raptur'd eyes,
And see the lovely spring arise:
Swell'd buds invest the grove again,
And streams remurmur o'er the plain.

D.M.	D.W.	Aspects, Holidays, Heights of High Water, Weather, Etc.	Farmer's Calendar.
1	Sa.	All Fool's ☾ Rides low {9.9 8.3	*Winter's*
2	A	Low S. Seven Sorrows • Shad are running	*back's*
3	M.	Jesus Crucified 3.00 P.M. 33 A.D. {9.0 7.9	*broken by this*
4	Tu.	*Little saved,* • Marry bet. *Little reaped* • Apr. 3 & 30 {8.9 8.0	*terrible*
5	W.	Ark grounded on Mt. Ararat B.C. 2348 • {8.9 8.3	*soakin'.*
6	Th.	U.S. decl. War Germany 1917 • Span. H. Bomb rec'd 1966	*Purr.*
7	Fr.	Keep out of arguments • Henry Ford D. 1947 ☌☿☾	*sir.*
8	Sa.	☾ on Eq. • ☌♄☾ • ☾ in Apo. {9.2 9.2	*Nice*
9	A	2nd a. E. Bataan 1942 Tides {9.2 9.4	*to be*
10	M.	*If you give away an old coat* *Don't cut off the buttons* {9.1 9.5	*kist*
11	Tu.	Mosiem New Year • Tides {— 9.0	*in this*
12	W.	Tornadoes kill 235 midwest 1965 • Hol. N.C. {9.5 8.8	*mist.*
13	Th.	Thomas Jefferson • ☌♀☾ • Hol. Md. Okla., Va.	*Cool,*
14	Fr.	Sardines running • Favorable conc. female child {9.4 8.8	*neat*
15	Sa.	☌☍☉ Israelites arr. wild. of sin 1491 B.C.	*summer*
16	A	3rd a. E. ☾ runs high Plant shrubs and trees	*heat.*
17	M.	☌♅☾ • ☌♀♄ • A truly evil day	*This last*
18	Tu.	*If you cannot obey* *You cannot command* • Sap run is over {9.0 8.1	*blast*
19	W.	Patriots' Day • Hol. Me., Mass.	*soon joins*
20	Th.	Last killing frost (Boston) Tides {9.6 9.2	*the past.*
21	Fr.	Mars 55,894,000 miles distant • ☌☉☾ • ☌ Nearest Earth	
22	Sa.	Meteor Showers ☾ On Eq. {10.4 10.7	*Move over.*
23	A	4th a. E. ☌☍☾ ☾ in Peri.	*Casanova.*
24	M.	The full pink moon 7.04 A.M. Total eclipse begins 4.28 A.M.	*April*
25	Tu.	Mark Evan. • Latest possible Easter date ☌ΨP	*showers*
26	W.	Passover 2nd day • Tides {11.7 10.3	*bring May*
27	Th.	*Behold I bring thee* *Tidings of great joy* {11.5 9.9	*mowers.*
28	Fr.	National Arbor Day ☾ rides low {11.0 9.8	*These days*
29	Sa.	DAYLIGHT SAVING BEGINS TOMORROW •	*bring love*
30	A	Rog. S. • Ice out all lakes	*from above.*

Set clocks ahead one hour before retiring Saturday 29th.

"Graft fruit trees."

In eighteenth century America, the apple was the farm's most common fruit tree, usually grown from seed and not grafted. The mystery of apple seeds is that when they sprout and grow, their fruit is seldom like their parents'. A grafted scion nearly always comes "true" to the kind of tree from which it was taken. But it was the infinite variety of apple seedlings which gave the early orchardist (if he understood grafting) limitless possibilities to propagate and discard, as with no other fruit in the world.

When the first Old Farmer's Almanac went to press, Johnny Appleseed was spreading his seeds to Indians and settlers and farmers from Connecticut to the Ohio. Immigrants from the old world were bringing seedlings and scions of their favorite fruits to the new. As early as 1730 the Huguenots on Long Island were growing and sometimes grafting their French fruits, though the first record of grafting was in Virginia in 1647. In Dutchess County, New York, commercial orchards flourished, as did the large orchards in Marietta, Ohio — orchards grafted from Israel Putnam's trees in Pomfret, Connecticut. America was a land of forests and farms and apples.

And what magic there is still in the names of those ancient, first, "tree" apples, heritage of the wild: Russet, Pearmain, Pippin — Gravenstein, Gilliflower, Greening. When will their flavour fade?

ASTRONOMICAL CALCULATIONS.

☉'s Declination

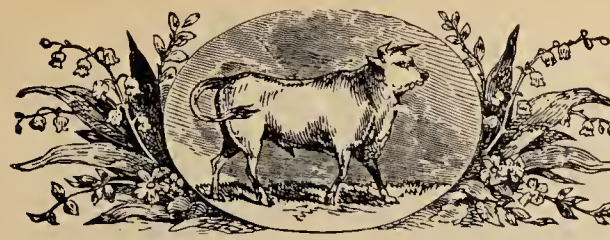
Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
1	15N.01	7	16 45	13	18 20	19	19 43	25	20 55		
2	15 19	8	17 02	14	18 35	20	19 56	26	21 05		
3	15 37	9	17 18	15	18 49	21	20 09	27	21 16		
4	15 54	10	17 34	16	19 03	22	20 21	28	21 25		
5	16 11	11	17 50	17	19 17	23	20 32	29	21 35		
6	16 28	12	18 05	18	19 20	24	20 44	30	21 44		

☾ Last Quarter, 1st day, 5 h. 33 m., morning, E.
● New Moon, 9th day, 9 h. 56 m., morning, E.
☽ First Quarter, 17th day. 12 h. 18 m., morning, W.
○ Full Moon, 23rd day, 3 h. 23 m., evening, E.
☾ Last Quarter, 30th day, 8 h. 52 m., evening, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☉ Rises h. m.	Key	☉ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea. Boston. Morn h.	Full Sea. Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
121	1	M.	4 40	E	6 44	M	14 04	19	4½	5¼	1$^{A}_{M}$32	O	10$^{A}_{M}$50	D	AQR	22
122	2	Tu.	4 38	E	6 45	M	14 07	19	5½	6½	2 02	M	11$^{A}_{M}$57	E	AQR	23
123	3	W.	4 37	E	6 46	M	14 09	19	6¾	7¼	2 26	L	1$^{P}_{M}$01	F	PSC	24
124	4	Th.	4 36	E	6 47	M	14 11	19	7½	8¼	2 47	K	2 03	H	PSC	25
125	5	Fr.	4 34	E	6 48	M	14 14	19	8½	9	3 06	J	3 04	I	ARI	26
126	6	Sa.	4 33	E	6 49	M	14 16	19	9¼	9½	3 34	I	4 04	J	ARI	27
127	7	A	4 32	E	6 50	M	14 18	19	10	10	3 42	G	5 06	K	ARI	28
128	8	M.	4 31	E	6 51	M	14 21	19	10½	10¾	4 02	F	6 09	M	TAU	29
129	9	Tu.	4 29	E	6 52	M	14 23	19	11¼	11¼	4 24	E	7 14	–	TAU	0
130	10	W.	4 28	E	6 54	M	14 25	19	11¾	—	4 51	D	8 19	N	G'M	1
131	11	Th.	4 27	E	6 55	M	14 28	19	0	0½	5 24	B	9 24	O	G'M	2
132	12	Fr.	4 26	E	6 56	M	14 30	20	0½	1	6 05	B	10 25	P	G'M	3
133	13	Sa.	4 25	E	6 57	M	14 32	20	1¼	2	6 56	B	11$^{P}_{M}$19	P	CNC	4
134	14	A	4 24	D	6 58	N	14 34	20	2	2¾	7 57	B	—	P	CNC	5
135	15	M.	4 23	D	6 59	N	14 36	20	2¾	3½	9 05	B	12$^{A}_{M}$05	P	LEO	6
136	16	Tu.	4 22	D	7 00	N	14 38	20	3¾	4½	10 17	D	12 43	O	LEO	7
137	17	W.	4 21	D	7 01	N	14 40	20	4¾	5½	11$^{A}_{M}$32	E	1 14	M	VIR	8
138	18	Th.	4 20	D	7 02	N	14 42	19	5¾	6½	12$^{P}_{M}$48	G	1 40	L	VIR	9
139	19	Fr.	4 19	D	7 03	N	14 44	19	6¾	7¼	2 03	H	2 05	J	LIB	10
140	20	Sa.	4 18	D	7 04	N	14 46	19	7¾	8¼	3 21	J	2 28	I	LIB	11
141	21	A	4 17	D	7 05	N	14 48	19	8¾	9	4 40	L	2 52	G	SCO	13
142	22	M.	4 16	D	7 06	N	14 50	19	9½	10	6 01	M	3 19	F	SCO	14
143	23	Tu.	4 15	D	7 07	N	14 51	19	10½	10¾	7 22	–	3 51	D	SGR	15
144	24	W.	4 15	D	7 08	N	14 53	19	11½	11½	8 40	O	4 31	C	—	—
145	25	Th.	4 14	D	7 09	N	14 55	19	—	0¼	9 49	P	5 19	B	SGR	16
146	26	Fr.	4 13	D	7 10	N	14 56	19	0½	1	10 44	P	6 18	B	CAP	17
147	27	Sa.	4 13	D	7 11	N	14 58	19	1¼	2	11$^{P}_{M}$28	P	7 25	B	CAP	18
148	28	A	4 12	D	7 11	N	14 59	19	2¼	3	—	O	8 34	C	AQR	19
149	29	M.	4 11	D	7 12	N	15 01	18	3	3¾	12$^{A}_{M}$03	N	9 42	E	AQR	20
150	30	Tu.	4 11	D	7 13	N	15 02	18	4	4¾	12 29	M	10 49	F	PSC	21
151	31	W.	4 10	D	7 14	N	15 04	18	5	5¾	12$^{A}_{M}$51	L	11$^{A}_{M}$53	G	PSC	22

MAY hath 31 days. [1967



Enraptur'd Spring returns again,
The farmer plants the golden grain;
Hark, hark, the joy-inspiring grove,
Echoes to the voice of love.

D. M.	D. W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	M.	St. Philip & James • Law Day *Drought's*	"Begin to plant Indian corn upon high warm slopes."
2	Tu.	Last day Passover • Minor (1–3) Rogation {8.8 8.1 *forgot.*	Of all our foods, corn is the most truly American — American Indian, that is. But to the rest of the world, in its ignorance, corn largely means wheat or oats, not our stalked corn of cobs and kernels.
3	W.	Invention of Cross Tides {8.6 8.2 *Sun's bright,*	
4	Th.	Ascension Day • R.I. Ind. Day *flies bite.*	
5	Fr.	☾ on Eo. ♂☌☾ • Heavy Meteor Showers (4–6) *Pours*	
6	Sa.	Kentucky Derby Va. Gold Cup ☾ in Apo. *a while,*	The original Indian corn was the rather smaller ancestor of the decorative ears, black and white and blue and purple and red, that we hang in braided clusters at Thanksgiving and Christmas. But to our forefathers, as lately even as great-grandfather, it was the corn they fed their cattle and ate themselves — the corn of corn pudding, and roast corn over hot coals, and husking bees, where the red ears really paid off.
7	A	Ista. A. • *Better lose a jest than a friend* • *then*	
8	M.	Forest Fire Danger {8.8 9.6 *clear's the style,*	
9	Tu.	☉ Partial eclipse Tides {8.8 9.7 *then rains*	
10	W.	English Derby • Do not travel tomorrow {8.7 9.7 *a Nile*	
11	Th.	♂☿☉ Sup. *mile.*	
12	Fr.	The three chilly saints {Pankratus Liberatus Servatius {9.7 8.5 *Strike one,*	
13	Sa.	☾ runs high ♂♀☾ *home*	
14	A	Pent. • Whit. Mother's Day *run, hot*	
15	M.	[14th ♂Ψ☉ ☌♃☾] *sun, what fun.*	
16	Tu.	Beaver launched 1836 1st Pacific Coast S. S. • *This storm*	
17	W.	*After breakfast work a while After supper walk a mile* *never born.*	
18	Th.	♂♁☾ School Attendance Compulsory 1852 {9.4 9.2 *In it's*	
19	Fr.	☾ on Eq. Persians conq. Medes Ember *place days*	
20	Sa.	Armed Forces ♂ ♂ ☾ Days *of grace.*	
21	A	Trin. S. ☾ in Peri. {9.9 11.1 *Cloudburst,*	
22	M.	Burr treason trial 1807 • Victoria Day {10.1 11.4 *begorrah,*	
23	Tu.	The Full Flower Moon 3.23 P.M. ♂Ψ☾ {10.1 11.6 *wait 'til*	
24	W.	O.K. to marry until Dec. 3 {10.0 11.5 *tomorrow.*	
25	Th.	Corpus Christi • Owens broke 5 World Rec. tied a 6th—1935 *So fine,*	
26	Fr.	*Nothing but money is Sweeter than honey* ☾ Rides low *it's al-*	
27	Sa.	Golden Gate Bridge 1937 • ♂ Stat. in R.A. *most divine.*	
28	A	2nd a. P. Dionne quints born 1934 *Pshaw,*	
29	M.	☉ Stat. in R.A. Eclipse of 1919 upholds Einstein {9.7 8.4 *rainy*	
30	Tu.	Memorial Day • Joan of Arc Bt. 1431 *and raw.*	
31	W.	*Closed mouths catch no flies* Dunkerque 1940 {8.7 8.3 *Pollen*	

Indian corn was good, but within it were the possibilities of crosses and hybrids that would be far better; and hybridization has been to corn what grafting was to apples. White, gold, or yellow — midget, bantam or giant — more tender and sweet — we have them. But you can still plant Indian corn to eat. Great-grandpa did.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

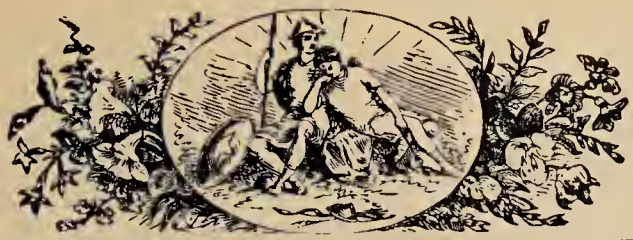
Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
1	22N.02	7	22 44	13	23 12	19	23 26	25	23 24		
2	22 10	8	22 50	14	23 15	20	23 26	26	23 22		
3	22 17	9	22 55	15	23 18	21	23 27	27	23 20		
4	22 25	10	23 00	16	23 21	22	23 27	28	23 18		
5	22 31	11	23 04	17	23 23	23	23 26	29	23 15		
6	22 38	12	23 09	18	23 24	24	23 25	30	23 12		

● New Moon, 8th day, 12 h. 14 m., morning, E.
☽ First Quarter, 15th day, 6 h. 12 m., morning, W.
○ Full Moon, 21st day, 11 h. 57 m., evening, W.
☾ Last Quarter, 29th day, 1 h. 40 m., evening, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☉ Rises h. m.	Key	☉ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
152	1	Th.	4 10	c	7 15	o	15 05	18	6	$6\frac{1}{2}$	$1^{A}_{M}11$	J	$12^{P}_{M}55$	H	PSC	23
153	2	Fr.	4 09	c	7 15	o	15 06	18	7	$7\frac{1}{2}$	1 29	I	1 54	J	ARI	24
154	3	Sa.	4 09	c	7 16	o	15 08	18	$7\frac{3}{4}$	8	1 48	H	2 55	K	ARI	25
155	4	A	4 08	c	7 17	o	15 09	18	$8\frac{1}{2}$	$8\frac{3}{4}$	2 06	F	3 58	L	TAU	26
156	5	M.	4 08	c	7 18	o	15 10	17	$9\frac{1}{4}$	$9\frac{1}{2}$	2 28	E	5 02	M	TAU	27
157	6	Tu.	4 08	c	7 18	o	15 11	17	10	$10\frac{1}{4}$	2 53	D	6 08	O	TAU	28
158	7	W.	4 07	c	7 19	o	15 12	17	$10\frac{3}{4}$	$10\frac{3}{4}$	3 25	C	7 14	P	G'M	29
159	8	Th.	4 07	c	7 20	o	15 13	17	$11\frac{1}{2}$	$11\frac{1}{2}$	4 03	B	8 17	P	G'M	0
160	9	Fr.	4 07	c	7 20	o	15 14	17	—	0	4 51	B	9 15	P	CNC	2
161	10	Sa.	4 07	c	7 21	o	15 14	16	$0\frac{1}{4}$	$0\frac{3}{4}$	5 49	B	10 04	P	CNC	3
162	11	A	4 06	c	7 21	o	15 15	16	1	$1\frac{1}{2}$	6 56	B	10 44	O	LEO	4
163	12	M.	4 06	c	7 22	o	15 16	16	$1\frac{3}{4}$	$2\frac{1}{2}$	8 09	D	11 17	N	LEO	5
164	13	Tu.	4 06	c	7 22	o	15 16	16	$2\frac{1}{2}$	$3\frac{1}{4}$	9 23	E	$11^{P}_{M}45$	L	VIR	6
165	14	W.	4 06	c	7 23	o	15 17	16	$3\frac{1}{2}$	4	10 37	F	—	—	VIR	7
166	15	Th.	4 06	c	7 23	o	15 17	15	$4\frac{1}{2}$	5	$11^{A}_{M}51$	H	$12^{A}_{M}09$	K	LIB	8
167	16	Fr.	4 06	c	7 24	o	15 18	15	$5\frac{1}{4}$	6	$1^{P}_{M}04$	J	12 31	I	LIB	9
168	17	Sa.	4 06	c	7 24	o	15 18	15	$6\frac{1}{2}$	7	2 21	K	12 55	H	SCO	10
169	18	A	4 06	c	7 24	o	15 18	15	$7\frac{1}{2}$	$7\frac{3}{4}$	3 39	M	1 19	F	SCO	11
170	19	M.	4 06	c	7 25	o	15 18	15	$8\frac{1}{2}$	$8\frac{3}{4}$	4 58	N	1 48	E	SGR	12
171	20	Tu.	4 06	c	7 25	o	15 19	14	$9\frac{1}{4}$	$9\frac{1}{2}$	6 16	O	2 23	C	SGR	13
172	21	W.	4 07	c	7 25	o	15 19	14	$10\frac{1}{4}$	$10\frac{1}{2}$	7 29	P	3 07	B	CAP	14
173	22	Th.	4 07	c	7 25	o	15 19	14	$11\frac{1}{4}$	$11\frac{1}{4}$	8 31	P	4 00	B	—	—
174	23	Fr.	4 07	c	7 26	o	15 18	14	—	0	9 20	O	5 04	B	CAP	15
175	24	Sa.	4 07	c	7 26	o	15 18	13	$0\frac{1}{4}$	$0\frac{3}{4}$	9 59	N	6 13	C	CAP	16
176	25	A	4 08	c	7 26	o	15 18	13	1	$1\frac{3}{4}$	10 29	M	7 24	D	AQR	17
177	26	M.	4 08	c	7 26	o	15 18	13	$1\frac{3}{4}$	$2\frac{1}{2}$	10 54	L	8 33	E	AQR	18
178	27	Tu.	4 08	c	7 26	o	15 18	13	$2\frac{1}{2}$	$3\frac{1}{4}$	11 15	K	9 39	G	PSC	19
179	28	W.	4 09	c	7 26	o	15 17	13	$3\frac{1}{2}$	4	11 33	I	10 42	H	PSC	20
180	29	Th.	4 09	c	7 26	o	15 17	12	$4\frac{1}{4}$	5	$11^{P}_{M}52$	H	$11^{A}_{M}44$	I	ARI	21
181	30	Fr.	4 10	c	7 26	o	15 16	12	$5\frac{1}{4}$	$5\frac{3}{4}$	—	—	$12^{P}_{M}44$	J	ARI	22

JUNE hath 30 days. [1967



In florid beauty all appears.
And nymphs, a crown of roses wear,
See the pigmy corn in rows,
And farmers busy with their hoes.

D. M.	D. W.	Aspects, Holidays, Heights of High Water, Weather, etc.	
1	Th.	Nicomede • N.H. Turtles lay eggs {8.4 8.4	*now*
2	Fr.	Sacred Heart ☾ on Eq. ☾ in Apo. ♂ ☌ ☾	*falling.*
3	Sa.	Jefferson Davis Day • Hol. Fla., La., Miss., S.C., Tenn., Tex., Va. {8.2 8.9	
4	A	2nd a. ♎. ☿ Stat. in R.A. {8.2 9.2	*Rain,*
5	M.	*Necessity never made a good bargain* • Socrates B. B.C. 468	*that's*
6	Tu.	Invasion D Day • Heavy Meteor Showers (6–10)	*plain.*
7	W.	*Three will keep a secret But only if two are dead* {8.5 9.8	*Cheerio,*
8	Th.	Alma 1966 ♂ ☿ ☾ Tides {8.5 9.9	*deario.*
9	Fr.	B'day Cath. Ch. U.S.A. 1784 ☾ runs high	*Too damp*
10	Sa.	Earliest Sunrises (11–20) ♂ ☿ ☾	*at the camp.*
11	A	4th a. ♑. St. Barn. ♂ ♃ ☾ ♂ ☿ ☾	*Cone*
12	M.	Mercury visible ☿ Gr. El. ☿ E. {10.0 8.7	*of ozone.*
13	Tu.	Virgin Mary Died 40 A.D. Tides {9.9 8.9	*Good for*
14	W.	Flag Day ♂ ☉ ☾ Shevuoth {9.8 9.1	*sellers of*
15	Th.	Harvard '67 Commencement Tides {9.6 9.4	*umbrellas.*
16	Fr.	☾ on Eq. ♂ ☌ ☾ Radio Static	*Best clime for*
17	Sa.	Bunker's Hill Day • Hol. Suff. Co. Mass. • Tides {9.4 10.3	
18	A	4th a. ♎. ☾ in Perl. Father's Day	*wedding*
19	M.	Longest Days (20–22) ♂ ♆ ☾ Tides {9.3 11.0	*time.*
20	Tu.	[21st — Full Hot Moon 11.57 P.M.] ☿ Gr. El. ☿ E.	*Moisture*
21	W.	Summer Begins 9:23 P.M. Sun enters Cancer {9.4 11.2	
22	Th.	Organic Act Day Virgin Islands ☾ rides low	*wets the*
23	Fr.	Latest Sunsets 23–July 2 • Now hill your corn	*cloister.*
24	Sa.	John Bapt. Born • Trees finish annual growth {10.9 9.1	*Get*
25	A	6th a. ♑. ☿ Stat. in R.A. Tides {10.5 9.0	*set,*
26	M.	AB. Doubleday, father Am. Baseball, B. 1819 {10.1 8.8	*pet, it's*
27	Tu.	*A man between two lawyers Is a fish between two cats* •	*hot you'll*
28	W.	Assassinations at Sarajevo began World War I — 1914 {9.1 8.6	*get*
29	Th.	St. Peter & St. Paul ☾ on Eq. ♂ ☌ ☾	*then*
30	Fr.	Delmarva Chicken Festival (29–1st) ☾ in Apo.	*twice wet.*

The Lord is the strength of my life, of whom shall I be afraid?

Farmer's Calendar.

"Plough fallows while the dew is on them."

The fallow field, unplanted for a season, was not left idle to bake and go to weeds. Part of the farmer's husbandry was to keep it alive and loose — and moist, if he could.

To plough while the dew is on is not idle advice. It's the best time to plough, for dew is moisture, wet and precious, and should be turned in. And June is the last dew month before July and August, dry and weed-growing.

A farmer sets great store by dew, that most gentle and mysterious of moistures. He knows a heavy dew is far better than a wild, brief, afternoon shower that streams and steams the land for a few minutes and is gone.

A farmer knows how to use dew, and how to beware of it. He dusts his potatoes and beans, and the dew sticks the dust; but he does not touch his beans, else they rust; nor does he sow, for the seeds clobber together. To handle dew-wet apples is to spoil the "bloom," and berries picked in the dew mush and rot.

But his wife sets her towels out on the grass at night, and the dew in the morning brightens them as it dries. When she sweeps the step, she shakes the white rose bush and the red rose bush with her broom, and there is a shower for the roots. Now the boy digs his fish worms, high in the cool, wet soil. Only then to the fallows.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
1	23 N. 08	7	22 37	13	21 52	19	20 54	25	19 43		
2	23 04	8	22 30	14	21 43	20	20 43	26	19 30		
3	22 59	9	22 23	15	21 34	21	20 31	27	19 16		
4	22 54	10	22 16	16	21 24	22	20 20	28	19 03		
5	22 49	11	22 08	17	21 15	23	20 08	29	18 49		
6	22 43	12	22 00	18	21 04	24	19 55	30	18 34		

● New Moon, 7th day, 12 h. 01 m., evening, W.
☽ First Quarter, 14th day, 10 h. 53 m., morning, E.
○ Full Moon, 21st day, 9 h. 40 m., morning, W.
☾ Last Quarter, 29th day, 7 h. 15 m., morning, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☺ Rises h. m.	Key	☺ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
182	1	Sa.	4 10	C	7 26	O	15 16	12	6	6½	12$^{A}_{M}$10	G	1$^{P}_{M}$46	L	ARI	23
183	2	A	4 11	C	7 26	O	15 15	12	7	7¼	12 31	F	2 49	M	TAU	24
184	3	M.	4 11	C	7 25	O	15 14	12	7¾	8	12 54	E	3 54	N	TAU	25
185	4	Tu.	4 12	C	7 25	O	15 13	11	8¾	9	1 22	C	5 00	P	G'M	26
186	5	W.	4 12	C	7 25	O	15 12	11	9½	9½	1 59	B	6 05	P	G'M	27
187	6	Th.	4 13	C	7 25	O	15 12	11	10¼	10½	2 44	B	7 06	P	CNC	28
188	7	Fr.	4 14	C	7 24	O	15 11	11	11	11	3 39	B	7 58	P	CNC	29
189	8	Sa.	4 14	C	7 24	O	15 10	11	11¾	11¾	4 44	B	8 43	P	CNC	1
190	9	A	4 15	C	7 24	O	15 09	11	—	0½	5 57	C	9 18	N	LEO	2
191	10	M.	4 16	C	7 23	O	15 07	10	0½	1¼	7 11	E	9 47	M	LEO	3
192	11	Tu.	4 16	C	7 23	O	15 06	10	1½	2	8 27	F	10 13	K	VIR	4
193	12	W.	4 17	C	7 22	O	15 05	10	2¼	2¾	9 42	H	10 36	J	VIR	5
194	13	Th.	4 18	D	7 21	N	15 04	10	3	3¾	10$^{A}_{M}$56	I	10 59	H	LIB	6
195	14	Fr.	4 19	D	7 21	N	15 02	10	4	4½	12$^{P}_{M}$10	K	11 22	G	LIB	7
196	15	Sa.	4 19	D	7 20	N	15 01	10	5	5½	1 26	L	11$^{P}_{M}$49	E	SCO	8
197	16	A	4 20	D	7 20	N	14 59	10	6	6½	2 43	N	—	—	SCO	9
198	17	M.	4 21	D	7 19	N	14 58	10	7	7½	3 59	O	12$^{A}_{M}$21	D	SGR	10
199	18	Tu.	4 22	D	7 18	N	14 56	10	8	8½	5 13	P	1 01	C	SGR	11
200	19	W.	4 23	D	7 17	N	14 55	10	9	9½	6 18	P	1 49	B	CAP	12
201	20	Th.	4 24	D	7 17	N	14 53	9	10	10¼	7 12	P	2 48	B	CAP	13
202	21	Fr.	4 25	D	7 16	N	14 51	9	11	11	7 54	O	3 55	C	—	—
203	22	Sa.	4 26	D	7 15	N	14 49	9	11¾	—	8 29	N	5 06	D	AQR	15
204	23	A	4 27	D	7 14	N	14 48	9	0	0½	8 55	M	6 16	E	AQR	16
205	24	M.	4 27	D	7 13	N	14 46	9	0¾	1¼	9 17	K	7 23	F	PSC	17
206	25	Tu.	4 28	D	7 12	N	14 44	9	1½	2	9 37	J	8 29	G	PSC	18
207	26	W.	4 29	D	7 11	N	14 42	9	2	2¾	9 55	I	9 31	I	PSC	19
208	27	Th.	4 30	D	7 10	N	14 40	9	3	3¼	10 14	G	10 32	J	ARI	20
209	28	Fr.	4 31	D	7 09	N	14 38	9	3½	4	10 33	F	11$^{A}_{M}$33	K	ARI	21
210	29	Sa.	4 32	D	7 08	N	14 36	9	4½	5	10 55	E	12$^{P}_{M}$36	L	TAU	22
211	30	A	4 33	D	7 07	N	14 34	9	5¼	5¾	11 21	D	1 40	N	TAU	23
212	31	M.	4 34	E	7 06	M	14 32	9	6¼	6½	11$^{P}_{M}$54	B	2$^{P}_{M}$45	O	G'M	24

JULY hath 31 days. [1967

The farmers grind and whet their scythes,
While hay-stacks in the meadows rise:
Green fields and shady groves appear,
And rip'ning harvest crowns the year.

D.M.	D.W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	Sa.	Dominion Day • *Silence is often an answer* *No clouds,*	"Lay up such herbs for drying as are still in blow." The knowledge and use of herbs is as old as mankind itself. Herbs for healing, herbs for cooking, herbs for good smelling. How easily we label them, who really know nothing of the lore of herbs. This pleasant little jar of dried ginger is part of that lore, and so is the Deadly Night Shade in the dark forest, and all kinds of other mysterious roots and blossoms. We grow an assortment of unmysterious herbs for salads and soups and roasts. If we want dried herbs, we buy them.
2	A	6th a. ☾. 1st U.S. Book Auction held at Boston 1717 *or*	
3	M.	Gettysburg Battle 1863 • Erie Canal beg. 1817 (4th) *shrouds.*	
4	Tu.	Ind. Day Year's lowest A.M. High Tide (7.9) *The won-*	
5	W.	Earth distant from sun 94,516,000 mi. *der of thunder.*	
6	Th.	☾runs high John Paul Jones B. 1747 "Washington of the Seas" {8.3 {9.9	
7	Fr.	Ringo Starr Born 1940 • {8.5 {10.2 *Reach for the*	
8	Sa.	Take no chances tomorrow • Liberty Bell cracked 1835 *beach.*	
9	A	8th a. ♇. ☌☽ ☌♀☉ Inf. *White*	
10	M.	☌♀☾ Satellite Telstar Launched 1962 {10.5 {9.2 *heads*	
11	Tu.	*The eye of the master does more work than his hands* • *in West,*	
12	W.	Thoreau Born 1817 ☌☉☾ Tides {10.3 {9.7 *hayers*	
13	Th.	☾on Eq. • Nathan Forrest • Hol. Tenn. *work best.*	
14	Fr.	Bastille Day • ☌☽☾ • ☾in Perl. *Hammock*	
15	Sa.	St. Swithin Rain today tis said means 40 more ahead *in*	
16	A	8th a. ☾. ☌♆☾ {9.0 {10.3 *shade, finest*	
17	M.	14 hr. Cloudburst N.C.-Pa. killed 15 1942 {8.8 {10.4 *bed yet*	
18	Tu.	*Many a miser—with all his store Has died of want—the want of more* *made.*	
19	W.	☾rides low U.S. women decl. their independence 1848 *Icky,*	
20	Th.	☿Stat. in R.A. • Sitting Bull Surr. 1881 {8.9 {10.7 *sticky,*	
21	Fr.	The Full Buck Moon 9.40 A.M. Tides {9.0 {10.7 *gicky &*	
22	Sa.	M. Magdalene • Very very hot 1926 {9.1 {10.5 *ticky.*	
23	A	10th a. ♇. {9.1 *Nature's ration*	
24	M.	Gather your medicinal herbs • Venus Gtst. brilliancy *for a*	
25	Tu.	St. James • Dog Days begin • Tammuz *fine*	
26	W.	St. Anne ♄Stat. in R.A. ☾on Eq. *vacation.*	
27	Th.	Pony Penning Assateague, Va. ☌♄☾ {9.0 {8.8 *Drizzle,*	
28	Fr.	Hurr. season begins V.I. • ☾in Apo. {8.6 {8.7 *drazzle,*	
29	Sa.	*There's no ugly love Or handsome prison* • ☿Gr. El. W. *sizzle.*	
30	A	10th a. ☾. Tides {7.8 {8.6 *Go swim-ini*	
31	M.	World War I began 1914 • Bob Taft D. 1953 *your bikini.*	

But the old farmer's wife didn't. The drying of herbs was one of her important jobs. Most of the herbs she would gather just before blossoming, tie them in bundles, and hang them up to dry, probably under the eaves of the poreh out of the sun. When she had powdered, erushed, broken, or left them in stalks, she put them up attic in bags and jars.

To the pioneer wife, the wise gathering and curing of herbs and simples (medicinal herbs) was more than important. It was vital. The value of a simple might well be her child's life. She had no other medieine — no other help in healing. She had to believe that in some one of her precious herbs — ehamomile, gensing, woodbitney, hoarhound, golden seal, or others of her gathering, was the power to cure.

A far cry from dried ginger in a pretty store jar.

1967] AUGUST, EIGHTH MONTH.

ASTRONOMICAL CALCULATIONS.

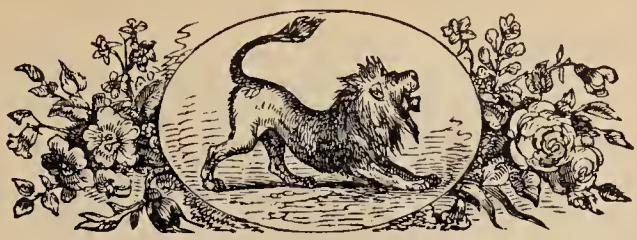
☉'s Declination.	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days	0 /
	1	18N.05	7	16 29	13	14 44	19	12 51	25	10 50
	2	17 50	8	16 13	14	14 26	20	12 31	26	10 30
	3	17 34	9	15 55	15	14 08	21	12 12	27	10 09
	4	17 18	10	15 38	16	13 49	22	11 52	28	9 48
	5	17 02	11	15 20	17	13 30	23	11 31	29	9 26
	6	16 46	12	15 03	18	13 11	24	11 11	30	9 05

● New Moon, 5th day, 9 h. 49 m., evening, W.
☽ First Quarter, 12th day, 3 h. 45 m., evening, W.
○ Full Moon, 19th day, 9 h. 27 m., evening, E.
☾ Last Quarter, 28th day, 12 h. 35 m., morning, E.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☉ Rises h. m.	Key	☉ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
213	1	Tu.	4 35	E	7 05	M	14 30	10	7	7½	—	—	3 P M 51	P	G'M	25
214	2	W.	4 36	E	7 04	M	14 28	10	8	8¼	12 A M 34	B	4 53	P	G'M	26
215	3	Th.	4 37	E	7 03	M	14 25	10	9	9	1 25	B	5 49	P	CNC	27
216	4	Fr.	4 38	E	7 01	M	14 23	10	9¾	10	2 27	B	6 37	P	CNC	28
217	5	Sa.	4 39	E	7 00	M	14 21	10	10½	10¾	3 38	B	7 16	O	LEO	29
218	6	A	4 40	E	6 59	M	14 19	10	11¼	11½	4 53	D	7 49	M	LEO	1
219	7	M.	4 41	E	6 58	M	14 16	10	—	0	6 11	E	8 16	L	VIR	2
220	8	Tu.	4 43	E	6 56	M	14 14	10	0¼	0¾	7 28	G	8 40	J	VIR	3
221	9	W.	4 44	E	6 55	M	14 11	10	1	1½	8 44	I	9 03	I	LIB	4
222	10	Th.	4 45	E	6 54	M	14 09	11	2	2½	9 59	J	9 26	G	LIB	5
223	11	Fr.	4 46	E	6 52	M	14 07	11	2¾	3¼	11 A M 16	L	9 52	F	SCO	6
224	12	Sa.	4 47	E	6 51	M	14 04	11	3¾	4¼	12 P M 33	M	10 21	D	SCO	7
225	13	A	4 48	E	6 50	M	14 02	11	4¾	5	1 50	O	10 59	C	SGR	8
226	14	M.	4 49	F	6 48	L	13 59	11	5¾	6¼	3 04	P	11 P M 44	B	SGR	9
227	15	Tu.	4 50	F	6 47	L	13 57	11	7	7¼	4 11	P	—	—	CAP	10
228	16	W.	4 51	F	6 45	L	13 54	12	8	8¼	5 07	P	12 A M 38	B	CAP	11
229	17	Th.	4 52	F	6 44	L	13 52	12	9	9¼	5 53	O	1 42	B	AQR	12
230	18	Fr.	4 53	F	6 42	L	13 49	12	10	10	6 28	N	2 51	C	AQR	13
231	19	Sa.	4 54	F	6 41	L	13 47	12	10¾	11	6 57	M	4 00	D	PSC	14
232	20	A	4 55	F	6 39	L	13 44	12	11½	11½	7 20	L	5 09	F	—	—
233	21	M.	4 56	F	6 38	L	13 41	13	—	0	7 41	J	6 15	G	PSC	15
234	22	Tu.	4 57	F	6 36	L	13 39	13	0¼	0¾	7 59	I	7 18	H	PSC	16
235	23	W.	4 58	F	6 34	L	13 36	13	1	1¼	8 18	H	8 20	I	ARI	17
236	24	Th.	4 59	F	6 33	L	13 33	13	1½	2	8 36	G	9 22	K	ARI	18
237	25	Fr.	5 00	F	6 31	L	13 31	14	2¼	2½	8 57	E	10 25	L	ARI	19
238	26	Sa.	5 02	F	6 30	L	13 28	14	3	3¼	9 21	D	11 A M 28	M	TAU	20
239	27	A	5 03	G	6 28	K	13 25	14	3¾	4	9 50	C	12 P M 32	O	TAU	21
240	28	M.	5 04	G	6 26	K	13 23	15	4½	5	10 26	B	1 36	P	G'M	22
241	29	Tu.	5 05	G	6 25	K	13 20	15	5½	6	11 P M 11	B	2 39	P	G'M	23
242	30	W.	5 06	G	6 23	K	13 17	15	6½	6¾	—	—	3 38	Q	CNC	24
243	31	Th.	5 07	G	6 21	K	13 15	16	7½	7¾	12 A M 08	B	4 P M 28	P	CNC	25

AUGUST hath 31 days. [1967



Now see the majestic columns rise,
Dark vapours cloud the gloomy skies;
See, forked lightning from the cloud,
Now, hideous thunder roars aloud.

D.M.	D.W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	Tu.	Lammas D. Unlucky Days 1–16 • Hol. Col.	*Sunny,*
2	W.	First St. Louis Steamboat 1817 • Bloody Mon. 1806	*honey.*
3	Th.	☾ runs high ☿ Stat. in R.A. Tides {8.0 9.6	*First*
4	Fr.	Borden Murders Fall River 1892 ☌☿☾ {8.3 10.1	*of four*
5	Sa.	*The calmest husbands make the stormiest wives* {8.7 10.5	*storms*
6	A	12th a.♇. Transfiguration ♀ Stat. in R.A.	*that*
7	M.	Name of Jesus • Titov Orbit. Earth 17 ti. 1961 ☌♀☾	
8	Tu.	☌♃☉ ☌☉☾ Shooting Stars (9–14)	*pour.*
9	W.	☾ in Perl. ☾ on Eq. • Francis Scott Key B. 1780	*Play*
10	Th.	St. Lawrence Fulton's First Trip SS Clermont 1807	*while*
11	Fr.	Barbadoes Hurr. 1831 • Heavy Meteor Showers (10–13)	*ye may.*
12	Sa.	Hay Fever begins ☌♂☾ ☌☿☾	*No. 2 of*
13	A	12th a.♎. Los Angeles flies U.S. Flag 1846	*the stew.*
14	M.	*He that riseth late Must trot all day* • Hol. Ark., R.I.	*Pip for*
15	Tu.	Assumption Virgin Mary AV ☾ rides low {8.4 10.0	*a trip.*
16	W.	Battle of Bennington, Vt. • R100 arr. Eng. 1930	*No. 3's*
17	Th.	Blondin crossed Niagara on tightrope 1859	*on the "line",*
18	Fr.	Eleanor and Ananias produced Virginia — Roanoke, Va. 1587	*sailors*
19	Sa.	The Full (9.27 P.M.) • *Hasten slowly* Sturgeon Moon	*beware*
20	A	14th a.♇. Parallel with Apr. 23 {9.1 10.2	*of this*
21	M.	Destroy bushes and sprouts Tides {— 9.2	*time.*
22	Tu.	"Your Majesty, there ain't no second" Cowes, Eng. 1851 •	*Your*
23	W.	☾ on Eq. ☌♄☾	*turn for sunburn.*
24	Th.	St. Barth. ☌☿☉ Sup. {9.8 9.2	*No. 4's*
25	Fr.	Gt. So. Atlantic Coast Storm killed 2000, 1893 ☾ in Apo.	*the tail*
26	Sa.	*Hunt two hares and you'll lose one and leave the other* {8.5 8.9	*end of*
27	A	14th a.♎. Confucius B. 550 B.C. {8.1 8.7	*the one*
28	M.	Betsy '65 • This moon is Dora '64 underground {7.7 8.6	*before.*
29	Tu.	John Bapt. beheaded ☌♂♆ ☌♀☉ Inf.	*Yippy!*
30	W.	Cleopatra suicide B.C. 30 ☾ runs high {7.5 8.8	*clear &*
31	Th.	Rodgers S.F.-Haw. Dis. Flight 1925 Tides {7.7 9.2	*zippy.*

"Seeds nearly ripe must be gathered from the birds; such as cabbage, fennel, lettuce, mustard, etc."

The crops of the early farmer, the first settler, had a double necessity. They must feed him and his family and his livestock, and their seeds must be saved for next spring's planting.

Seeds were as important as the crop. Loss of crops before seed time could be a calamity, for he could not just order seeds, or go out and buy them. Droughts or floods or great storms, wiping out the crops of his region, could well cause the wholesale abandonment of the farms. And sometimes this happened. It was one contributing factor to westward expansion.

Youngsters of the farm family at the task of scaring away birds from the fennel and the cabbages would seem a pleasant picture. But at seed time it was a tedious, necessary job, as important as a reaper's or a shepherd's.

Everything on a farm had a value — or might have, and so nothing was discarded — everything saved. But seeds, the irreplaceable, weren't just saved — they were stored away. A handful of seeds, if a man had none, could have bought a piece of his land, or his cow. But the seeds would have been given, for a gift of need is beyond value.

When a pioneer set his foot toward the west with a dream of his own cabin and clearing, he took with him three things — his gun, his axe, and his seeds.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
1	8N.22	7	6 09	13	3 53	19	1 34	25	0 46
2	8 00	8	5 47	14	3 30	20	1 11	26	1 09
3	7 38	9	5 24	15	3 07	21	0 48	27	1 32
4	7 16	10	5 01	16	2 44	22	0 24	28	1 56
5	6 54	11	4 39	17	2 21	23	0N.01	29	2 19
6	6 32	12	4 16	18	2 01	24	0S. 22	30	2 43

● New Moon, 4th day, 6 h. 38 m., morning, E.
☽ First Quarter, 10th day, 10 h. 06 m., evening, W.
○ Full Moon, 18th day, 12 h. 00 m., evening, E.
☾ Last Quarter, 26th day, 4 h. 44 m., evening, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☉ Rises h. m.	Key	☉ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
244	1	Fr.	5 08	G	6 20	K	13 12	16	S½	S½	1 A M 15	B	5 P M 11	O	LEO	26
245	2	Sa.	5 09	G	6 18	K	13 09	16	9¼	9½	2 28	C	5 46	N	LEO	27
246	3	A	5 10	G	6 16	K	13 06	16	10	10¼	3 46	E	6 15	L	LEO	28
247	4	M.	5 11	G	6 15	K	13 04	17	10¾	11	5 05	F	6 41	K	VIR	0
248	5	Tu.	5 12	G	6 13	K	13 01	17	11½	—	6 24	H	7 04	I	VIR	1
249	6	W.	5 13	G	6 11	K	12 58	17	0	0¼	7 42	J	7 28	H	LIB	2
250	7	Th.	5 14	G	6 09	J	12 55	18	0¾	1	9 01	K	7 54	F	SCO	3
251	8	Fr.	5 15	H	6 08	J	12 52	18	1½	2	10 20	M	S 23	E	SCO	4
252	9	Sa.	5 16	H	6 06	J	12 50	18	2½	2¾	11 A M 39	N	S 57	C	SGR	5
253	10	A	5 17	H	6 04	J	12 47	19	3½	3¾	12 P M 55	O	9 40	B	SGR	6
254	11	M.	5 18	H	6 02	J	12 44	19	4½	4¾	2 05	P	10 32	B	SGR	7
255	12	Tu.	5 19	H	6 01	J	12 41	19	5½	6	3 04	P	11 P M 33	B	CAP	9
256	13	W.	5 21	H	5 59	J	12 38	20	6¾	7	3 53	P	—	—	CAP	10
257	14	Th.	5 22	H	5 57	J	12 36	20	7¾	S	4 31	O	12 A M 41	C	AQR	11
258	15	Fr.	5 23	H	5 55	J	12 33	21	8¾	9	5 01	M	1 50	D	AQR	12
259	16	Sa.	5 24	H	5 54	J	12 30	21	9¾	9¾	5 25	L	2 58	E	PSC	13
260	17	A	5 25	H	5 52	J	12 27	21	10½	10½	5 46	K	4 05	F	PSC	14
261	18	M.	5 26	H	5 50	J	12 24	22	11	11½	6 05	J	5 09	H	—	—
262	19	Tu.	5 27	I	5 48	I	12 21	22	11½	11¾	6 23	H	6 11	I	ARI	15
263	20	W.	5 28	I	5 47	I	12 19	22	—	0	6 41	G	7 12	J	ARI	16
264	21	Th.	5 29	I	5 45	I	12 16	23	0½	0¾	7 01	F	S 14	L	ARI	17
265	22	Fr.	5 30	I	5 43	I	12 13	23	1	1¼	7 23	E	9 17	M	TAU	18
266	23	Sa.	5 31	I	5 41	I	12 10	23	1¾	2	7 49	C	10 21	N	TAU	19
267	24	A	5 32	I	5 39	I	12 07	24	2½	2¾	S 22	B	11 A M 25	P	G'M	20
268	25	M.	5 33	I	5 38	I	12 04	24	3¼	3½	9 03	B	12 P M 27	P	G'M	21
269	26	Tu.	5 34	I	5 36	I	12 02	24	4	4¼	9 54	A	1 27	Q	G'M	22
270	27	W.	5 35	I	5 34	I	11 59	25	5	5¼	10 P M 55	B	2 20	P	CNC	23
271	28	Th.	5 37	I	5 32	I	11 56	25	6	6¼	—	—	3 05	P	CNC	24
272	29	Fr.	5 38	I	5 31	I	11 53	25	7	7¼	12 A M 04	B	3 42	O	LEO	25
273	30	Sa.	5 39	I	5 29	II	11 50	26	S	S¼	1 A M 18	D	4 P M 13	M	LEO	26

SEPTEMBER hath 30 days. [1967

The various colour'd apples glow,
Upon the drowsy, bending bough,
The farmer now, at his leisure,
Mounts his horse, and rides for pleasure.

D.M.	D.W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	Fr.	Oysters in season • *He that knows least Presumes to know most* *This*	
2	Sa.	☌☿☾ 11 days dropped from calendar 1752 *month's*	
3	A	16th a. ☽. Hay Fever Peak *uncertain,*	"Put your hemp and flax a-rotting."
4	M.	Labor Day Moses Patriarch *rain raises the*	
5	Tu.	☌☿☉ ☾on Eq. Cranberry Harvest {10.5 11.2 *curtain.*	
6	W.	Floods Ct. 1867 ☾in Peri. Fishes spawn *Vacation*	What do we know of hemp and flax today, except their end products of rope, linen, linseed oil, and cigarette and Bible paper? But the growing and processing of hemp and flax was a true farm industry — a laborious and intricate one, from the pulling of the stalks and threshing out of the seed, to the long wetting in the dew or the mill pond, and the final beating to separate fibres from stems. But the labor of it and the need — rope and bagging and cloth — were typical of the old farmer's skills — skills that require today the focus of machines and specialists.
7	Th.	First Am. Cup Race 1886 Mayflower def. Galatea {11.0 11.1 *of short*	
8	Fr.	Nativity of Mary • Separate ewes from lambs *duration.*	
9	Sa.	☌☽☾ ☌☌☾ Hol. Cal. {10.1 10.8 *Drools*	
10	A	16th a. ♎. Plutonium 1st weighed 1942 {9.5 10.4 *cool*	
11	M.	Lucky Day for Reapers — Hesiod Tides{8.9 10.0 *pools.*	
12	Tu.	*To err is human, to repent divine, to persist devilish* ☾rides low {8.4 9.7	
13	W.	☌☿☉ Margaret Chase el. Sen. from Maine 1948 *Muggy,*	
14	Th.	Holy Cross Financial Panic 1857 {8.3 9.6 *no huggy.*	
15	Fr.	Fall foliage coloring now through Oct. 15 {8.5 9.7 *Tropical*	
16	Sa.	Sun, moon, & stars were made this day • Hol. Okla. *storm,*	
17	A	18th a. ♑. Citizenship Day {9.1 9.8 *perhaps*	
18	M.	Full Harvest Moon 12.00 P.M. ☌☉☉ ☿Stat. in R.A.	
19	Tu.	☌☾☾ ☾on Eq. Tides{9.4 9.6 *hurricane,*	
20	W.	Ember Day • Royalty abol. France 1792 *of these we*	
21	Th.	St. Matthew ☾in Apo. {9.4 9.5 *forewarn.*	
22	Fr.	American Indian Day • Nathan Hale exec. 1776 *Not now—*	
23	Sa.	Fall Begins 12.38 P.M. • Sun enters Libra *it's clear.*	
24	A	18th a. ♎. U.S. Army enters Mexico City 1847 *But*	
25	M.	First killing frost (Boston) Tides{8.0 8.8 *maybe here.*	
26	Tu.	*One ounce of wit bought Is worth a pound taught* ☾Runs high *Fine*	
27	W.	Night equals Day Tides{7.5 8.6 *& about time.*	
28	Th.	Adm. Sims D. 1936 • Brigitte Bardot born 1934 *Fluid*	
29	Fr.	St. Michael Vaughn skied 106.5 mph Chile 1963 *for*	
30	Sa.	St Jerome. ☌☿☾ • ☌☿☾ *Druids.*	

Now is the moment to decide — fly south or with the winter ride.

We wonder less that he knew all about hemp and flax, than that there was so much else he knew all about. Here was a man who could cut his timber, saw it and season it; he could build a house or a barn or a scoot or a barrow or a wooden pipe; he could cut posts, and split rails, and make fences, lay up walls, and dig wells. He was sower and reaper, cattle man, dairy man, shearer, shepherd, veterinarian and butcher. On the lighter side he smoked hams, tended bees, made sugar and cider, grew fruit, Yankee-traded — and was deacon.

We are amazed that the old almanac had the temerity to advise such a man.

ASTRONOMICAL CALCULATIONS.

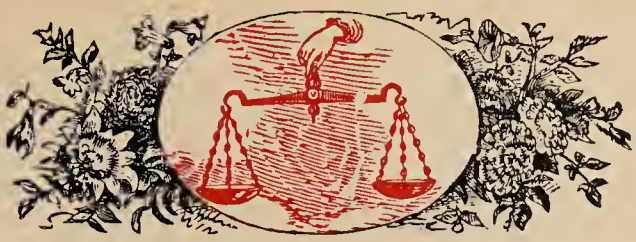
☉'s Declination.	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
	1	3s. 06	7	5 25	13	7 41	19	9 54	25	12 01
	2	3 29	8	5 48	14	8 04	20	10 16	26	12 22
	3	3 52	9	6 11	15	8 26	21	10 37	27	12 42
	4	4 16	10	6 34	16	8 48	22	10 59	28	13 03
	5	4 39	11	6 56	17	9 10	23	11 20	29	13 23
	6	5 02	12	7 19	18	9 32	24	11 41	30	13 43

● New Moon, 3rd day, 3 h. 24 m., evening, W.
☽ First Quarter, 10th day, 7 h. 11 m., morning, E.
○ Full Moon, 18th day, 5 h. 11 m,. morning, W.
☾ Last Quarter, 26th day, 7 h. 04 m., morning, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☉ Rises h. m.	Key	☉ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
274	1	A	5 40	J	5 27	H	11 47	26	$8\frac{3}{4}$	9	$2^{A}_{M}36$	E	$4^{P}_{M}40$	L	VIR	27
275	2	M.	5 41	J	5 25	H	11 45	26	$9\frac{1}{2}$	10	3 55	G	5 04	J	VIR	28
276	3	Tu.	5 42	J	5 24	H	11 42	27	$10\frac{1}{4}$	$10\frac{3}{4}$	5 14	I	5 28	H	LIB	29
277	4	W.	5 43	J	5 22	H	11 39	27	11	$11\frac{1}{2}$	6 34	J	5 53	G	LIB	1
278	5	Th.	5 44	J	5 20	H	11 36	27	—	0	7 56	L	6 21	E	SCO	2
279	6	Fr.	5 45	J	5 19	H	11 33	28	$0\frac{1}{2}$	$0\frac{3}{4}$	9 18	N	6 54	D	SCO	3
280	7	Sa.	5 47	J	5 17	H	11 30	28	$1\frac{1}{4}$	$1\frac{1}{2}$	10 39	O	7 35	C	SGR	4
281	8	A	5 48	J	5 15	H	11 28	28	$2\frac{1}{4}$	$2\frac{1}{2}$	$11^{A}_{M}54$	P	8 05	B	SGR	5
282	9	M.	5 49	J	5 14	H	11 25	28	3	$3\frac{1}{2}$	$12^{P}_{M}59$	P	9 25	B	CAP	6
283	10	Tu.	5 50	J	5 12	H	11 22	29	$4\frac{1}{4}$	$4\frac{1}{2}$	1 52	P	10 32	B	CAP	7
284	11	W.	5 51	J	5 10	G	11 19	29	$5\frac{1}{4}$	$5\frac{1}{2}$	2 33	O	$11^{P}_{M}41$	C	AQR	8
285	12	Th.	5 52	K	5 09	G	11 16	29	$6\frac{1}{2}$	$6\frac{3}{4}$	3 06	N	—	—	AQR	9
286	13	Fr.	5 53	K	5 07	G	11 14	29	$7\frac{1}{2}$	$7\frac{3}{4}$	3 31	M	$12^{A}_{M}49$	E	PSC	10
287	14	Sa.	5 55	K	5 05	G	11 11	30	$8\frac{1}{2}$	$8\frac{3}{4}$	3 52	K	1 56	F	PSC	11
288	15	A	5 56	K	5 04	G	11 08	30	$9\frac{1}{4}$	$9\frac{1}{2}$	4 12	J	3 00	G	PSC	12
289	16	M.	5 57	K	5 02	G	11 05	30	10	$10\frac{1}{4}$	4 29	I	4 02	I	ARI	13
290	17	Tu.	5 58	K	5 01	G	11 03	30	$10\frac{1}{2}$	$10\frac{3}{4}$	4 48	G	5 04	J	ARI	14
291	18	W.	5 59	K	4 59	G	11 01	31	11	$11\frac{1}{2}$	5 01	F	6 05	K	—	—
292	19	Th.	6 00	K	4 57	G	10 57	31	$11\frac{1}{2}$	—	5 28	E	7 08	M	TAU	15
293	20	Fr.	6 02	K	4 56	G	10 54	31	0	$0\frac{1}{4}$	5 52	D	8 12	N	TAU	16
294	21	Sa.	6 03	K	4 54	G	10 52	31	$0\frac{1}{2}$	$0\frac{3}{4}$	6 23	B	9 16	O	TAU	17
295	22	A	6 04	K	4 53	G	10 49	31	$1\frac{1}{4}$	$1\frac{1}{2}$	7 00	B	10 19	P	G'M	18
296	23	M.	6 05	K	4 51	G	10 46	31	2	2	7 47	A	$11^{A}_{M}19$	P	G'M	19
297	24	Tu.	6 06	L	4 50	F	10 44	32	$2\frac{3}{4}$	3	8 43	B	$12^{P}_{M}14$	Q	CNC	21
298	25	W.	6 08	L	4 48	F	10 41	32	$3\frac{1}{2}$	$3\frac{3}{4}$	9 47	B	1 00	P	CNC	22
299	26	Th.	6 09	L	4 47	F	10 38	32	$4\frac{1}{2}$	$4\frac{3}{4}$	$10^{P}_{M}58$	C	1 40	O	LEO	23
300	27	Fr.	6 10	L	4 46	F	10 36	32	$5\frac{1}{2}$	$5\frac{3}{4}$	—	—	2 12	N	LEO	24
301	28	Sa.	6 11	L	4 44	F	10 33	32	$6\frac{1}{2}$	$6\frac{3}{4}$	$12^{A}_{M}11$	E	2 39	L	LEO	25
302	29	A	6 13	L	4 43	F	10 30	32	$7\frac{1}{4}$	$7\frac{3}{4}$	1 27	F	3 04	K	VIR	26
303	30	M.	6 14	L	4 42	F	10 28	32	$8\frac{1}{4}$	$8\frac{1}{2}$	2 44	H	3 27	I	LIB	27
304	31	Tu.	6 15	L	4 40	F	10 25	32	9	$9\frac{1}{2}$	$4^{A}_{M}02$	J	$3^{P}_{M}51$	H	LIB	28

OCTOBER hath 31 days. [1967



Pomona her cheerful juices yields,
While golden harvest decks the fields.
See the enamel'd drooping trees,
Shedding their leaves at every breeze.

D.M.	D.W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	A	**20th a.P.** Freeze ferns for Xmas bouquets *Speak-*	"Rather cool, making cider."
2	M.	Child Health ☌☉☾ ☍☉ Hol. Mo. *ing of*	Anyone can get juice from an apple. But that was not
3	Tu.	☾on Eq. Prune or plant Forest Trees {10.7 11.0 *leaking!*	what the old farmer meant by making cider. In late Oc-
4	W.	Francis D'Assissi ☾in Peri. • Paul VI N.Y.C. 1965 *This*	tober it was business a man had to give time to — laborious if not intricate, yet a
5	Th.	Rosh Hashanah ☌☿☾ ♀Greatest brilliancy *first*	thing to be done just right.
6	Fr.	☌♆☾ *Better know a tree by its fruit than by its leaves* *freeze*	Pressing apples in his hand-
7	Sa.	[8th— Gedalia] Typhoon wave dr. 150,000 1737 {10.4 11.4 *really*	turned press, straining the juice, then pouring it into
8	A	**20th a.T.** ☌☌☾ • ☿Gr. El. E. *colors*	kegs was indeed "rather cool,"
9	M.	Lief Erikson • Parallel with Mar. 5 ☾rides low {9.2 10.3 *the*	not to mention wet. For there's nothing colder, wetter,
10	Tu.	U. S. Naval Acad. founded 1845 • Hol. Okla. {8.7 9.8 *trees.*	stickier than apple juice and
11	W.	[12th-Morrissey K.O.'d Sullivan 37 rds. 1853] • Hol. Neb. *In 1492*	pulp. A man even sweats cold handling it. But the real fin-
12	Th.	**Columbus Day** Holiday all st. exc. 10 {8.2 9.2 *it was*	icky part was after he had
13	Fr.	*Wide will wear, Narrow will tear.* Tides {8.4 9.2 *raining*	funneled the juice into his three fifty-gallon kegs (most
14	Sa.	**Yom Kippur** Sockeye salmon return home {8.7 9.2 *too.*	likely oak — never pine). One
15	A	**22nd a.P.** Poetry Day • Oct. 5 in 1582 *Walk*	hundred and fifty gallons —
16	M.	Gallus Day ☾on Eq. ☌☍☾ ♄occulted *up the*	a ton of his Baldwins, North-
17	Tu.	[18th-Full Travel Moon 5.11 A.M. partial eclipse begins 4.45] *Big*	ern Spies, or Russets.
18	W.	**St. Luke** Snow Gt. Lakes 1930 • Hol. Alas. *Rock.*	Now he emptied in a few
19	Th.	Tabernacles (First Day) Hoosac Tunnel expl. 1867 *Mystical*	cups of sugar or molasses to
20	Fr.	*Money, like manure, no good 'till spread* ☾in Apo. *crystals.*	start the juice "working" —
21	Sa.	☿Stat. In R.A. Heavy Meteor Showers (20–21) *Burning*	and over the next few weeks
22	A	**22nd a.T.** Lady Godiva unveiled again 1949 *wood*	it would do that, with a little
23	M.	Sun 32 min. faster than sundials 24-Nov. 12 *smells good.*	more sweetening, while the
24	Tu.	U.N. Day ☾runs high • Chipmunks hibernate {8.0 8.9 *Leaves*	fermentation, frothy and
25	W.	World Created 4004 B.C. 9.00 A.M. {7.7 8.8 *leaving the*	brown, oozed out around the
26	Th.	Tabernacles (Eighth Day) • Paris-N.Y.C. Daily Jet Flights 1958 *trees*	loose bung. Then when the
27	Fr.	Rejoicing of Law Tides {7.9 8.9 *ride high on the*	fermentation stopped, he'd
28	Sa.	**Simon & Jude** ☌♃☾ D.S.T. ends 29th *breeeze*	drive home the bung, sheathed
29	A	**24th a.P.** ☌♀☾ *Raincoat &*	in burlap, so he could better
30	M.	☾on Eq. ☌☉☾ *sweater, the warmer*	pull it out come spring.
31	Tu.	**Halloween** John Brown conv. 1859 *the better.*	He might draw some cider off in bottles, add a little sugar, cork and wire them well — for champagne cider. Or set a few gallons out in firkins to freeze, leaving the "core" unfrozen. That would be granite-hard "apple jack." But any way he used it, cider was his drink, better for his constitution and his pocket than West India Spirit, at least so he thought.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
	1	14s. 22	7	16 13	13	17 54	19	19 25	25	20 42		
	2	14 41	8	16 31	14	18 10	20	19 39	26	20 54		
	3	15 00	9	16 48	15	18 26	21	19 52	27	21 05		
	4	15 16	10	17 05	16	18 41	22	20 05	28	21 16		
	5	15 37	11	17 22	17	18 56	23	20 18	29	21 27		
	6	15 55	12	17 38	18	19 11	24	20 30	30	21 37		

● New Moon, 2nd day, 12 h. 49 m., morning, E.
☽ First Quarter, 8th day, 8 h. 00 m., evening, W.
○ Full Moon, 16th day, 11 h. 53 m., evening, W.
☾ Last Quarter, 24th day, 7 h. 24 m., evening, E.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☉ Rises h. m.	Key	☉ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea, Boston. Morn h.	Full Sea, Boston. Eve. h.	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
305	1	W.	6 16	L	4 39	F	10 23	32	10	$10\frac{1}{2}$	$5^{A}_{M}23$	K	$4^{P}_{M}17$	F	SCO	29
306	2	Th.	6 17	L	4 38	F	10 20	32	$10\frac{3}{4}$	$11\frac{1}{4}$	6 46	M	4 48	E	SCO	0
307	3	Fr.	6 19	L	4 36	F	10 18	32	$11\frac{1}{2}$	—	8 11	N	5 26	C	SGR	1
308	4	Sa.	6 20	L	4 35	F	10 15	32	0	$0\frac{1}{4}$	9 32	P	6 13	B	SGR	3
309	5	A	6 21	L	4 34	E	10 13	32	1	$1\frac{1}{4}$	10 45	P	7 11	B	CAP	4
310	6	M.	6 22	M	4 33	E	10 10	32	2	2	$11^{A}_{M}45$	P	8 17	B	CAP	5
311	7	Tu.	6 24	M	4 32	E	10 08	32	$2\frac{3}{4}$	3	$12^{P}_{M}32$	O	9 28	C	AQR	6
312	8	W.	6 25	M	4 31	E	10 06	32	$3\frac{3}{4}$	4	1 07	N	10 39	D	AQR	7
313	9	Th.	6 26	M	4 30	E	10 03	32	5	$5\frac{1}{4}$	1 35	M	$11^{P}_{M}47$	F	AQR	8
314	10	Fr.	6 28	M	4 28	E	10 01	32	6	$6\frac{1}{4}$	1 58	L	—	–	PSC	9
315	11	Sa.	6 29	M	4 27	E	9 59	32	7	$7\frac{1}{4}$	2 18	J	$12^{A}_{M}53$	G	PSC	10
316	12	A	6 30	M	4 26	E	9 56	32	8	$8\frac{1}{4}$	2 36	I	1 55	H	ARI	11
317	13	M.	6 31	M	4 25	E	9 54	31	$8\frac{1}{2}$	9	2 54	H	2 56	I	ARI	12
318	14	Tu.	6 33	M	4 25	E	9 52	31	$9\frac{1}{4}$	$9\frac{3}{4}$	3 12	G	3 57	K	TAU	13
319	15	W.	6 34	M	4 24	E	9 50	31	10	$10\frac{1}{4}$	3 33	E	5 00	L	TAU	14
320	16	Th.	6 35	M	4 23	E	9 48	31	$10\frac{1}{2}$	11	3 57	D	6 03	M	TAU	15
321	17	Fr.	6 36	M	4 22	E	9 46	31	11	$11\frac{1}{2}$	4 25	C	7 08	O	—	—
322	18	Sa.	6 38	M	4 21	E	9 43	30	$11\frac{3}{4}$	—	5 00	B	8 11	P	G'M	16
323	19	A	6 39	M	4 20	E	9 41	30	$0\frac{1}{4}$	$0\frac{1}{4}$	5 44	B	9 13	P	G'M	17
324	20	M.	6 40	N	4 19	D	9 39	30	1	1	6 37	A	10 10	Q	CNC	18
325	21	Tu.	6 41	N	4 19	D	9 37	30	$1\frac{1}{2}$	$1\frac{3}{4}$	7 38	B	10 59	P	CNC	19
326	22	W.	6 42	N	4 18	D	9 36	30	$2\frac{1}{4}$	$2\frac{1}{2}$	8 46	C	$11^{A}_{M}39$	P	CNC	20
327	23	Th.	6 44	N	4 17	D	9 34	29	$3\frac{1}{4}$	$3\frac{1}{4}$	9 57	D	$12^{P}_{M}14$	N	LEO	21
328	24	Fr.	6 45	N	4 17	D	9 32	29	4	$4\frac{1}{4}$	$11^{P}_{M}10$	F	12 41	M	LEO	22
329	25	Sa.	6 46	N	4 16	D	9 30	29	5	$5\frac{1}{4}$	—	–	1 06	K	VIR	23
330	26	A	6 47	N	4 16	D	9 29	28	6	$6\frac{1}{4}$	$12^{A}_{M}23$	G	1 29	J	VIR	24
331	27	M.	6 48	N	4 15	D	9 27	28	$6\frac{3}{4}$	$7\frac{1}{4}$	1 37	I	1 52	I	LIB	25
332	28	Tu.	6 49	N	4 15	D	9 25	28	$7\frac{3}{4}$	$8\frac{1}{4}$	2 54	J	2 15	G	LIB	26
333	29	W.	6 51	N	4 14	D	9 24	27	$8\frac{1}{2}$	9	4 14	L	2 42	E	SCO	27
334	30	Th.	6 52	N	4 14	D	9 22	27	$9\frac{1}{2}$	10	$5^{A}_{M}37$	N	$3^{P}_{M}15$	D	SCO	28

NOVEMBER hath 30 days. [1967

The summer's past! — and all its bloom
Is giving way to winter's gloom;
The flow'ry fields have lost their pride,
And smiling pleasure's turn'd aside.

D.M.	D. W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	W.	All Saints ☌☿☉ Inf. ☾ in Perl. *Foot-*	
2	Th.	All Souls ☉ Total Eclipse underground New moon is *ball*	
3	Fr.	☌♆☾ Yrs. highest A.M. high tide (11.9) *& summer*	
4	Sa.	Will Rogers • Year's highest P.M. high tide (11.8) *weather*	
5	A	24th a. ☾. ☾ ride low Fawkes' Plot's not forgot *all*	
6	M.	Noah born B.C. 2948 ☌♂☾ {9.6 10.8 *mixed in*	
7	Tu.	Antartic seals bearing young ☌♀☉ {9.0 10.2 *together.*	
8	W.	*Wisdom spun too fine* {8.6 *Haze —*	
9	Th.	*is folly* 9.6 Power Black-out N.Y.C. 65 ♀ Gr. El. W. {8.3 9.1 *then*	
10	Fr.	☿ Stat. in R.A. Descartes' great discovery 1619 *slippery*	
11	Sa.	St. Martin Veterans' Day • Hol. All. St. exc. 4 *glaze.*	
12	A	26th a. ℙ. ☌♄☾ • ☾ on Eq. • ♄ occulted	
13	M.	Indian (13–20) Summer • Cellar root crops *Behold,*	
14	Tu.	*Changing beds won't cure a fever* *the western sun*	
15	W.	Methuselah born B.C. 2349 ☾ in Apo. {9.4 8.7 *all gold,*	
16	Th.	The full Beaver Moon 11.53 P.M. ☌♆☉ *this rainy*	
17	Fr.	Heavy Meteor Showers tonight ☿ Gr. El. ♀ W. *one fore-*	
18	Sa.	Sady Hawkins • Cong. adopted Standard Time 1883 *told.*	
19	A	26th a. ☾. Alewives back in sea *This fine*	
20	M.	☾ runs high • *Use not today what tomorrow may want* *November*	
21	Tu.	Mayflower Compact • 1st steamer St. Lawrence R. 1846 *sky*	
22	W.	John F. Kennedy assas. 1963 Lyndon B. Johnson bec. Pres. *won't*	
23	Th.	Thanksgiving Day *stay long dry.*	
24	Fr.	Prune your grapevines ☌♃☾ *Thanksgiving's*	
25	Sa.	Days (9 h. 30 min.) now shorter by 5 h. 49 min. than June 22 *clear,*	
26	A	28th a. ℙ. ☌☉☾ {8.9 9.2 *but the*	
27	M.	Portland sank 1898 ☾ on Eq. *sleety drive back,*	
28	Tu.	Geese now flying south ☌♀☾ {10.2 9.6 *oh dear!*	
29	W.	*Knaves and nettles are akin* *Stroke 'em kindly, still they sting* *Glary,*	
30	Th.	St. And. ☌☿☾ ☾ in Peri. *but dark early,*	

Be gay — spring is only about 112 wintry days away.

"Thrash your grain of all sorts as it will never thrash better."

The passing of the old New England farm, as the passing of any way of life, leaves behind its pathetic clutter of things — under the attic eaves, deep in the corner of barns — needful things once that have no need anymore, and to some of us who find them, no meaning.

The other day I watched my grandson coming out of our barn. There was puzzlement on his face as he looked at what he was carrying: an old flail, or what was left of it. What should he know of this strange thing, these two clackety pieces of wood held together by the tatters of a thong? What should he know, who had never seen a field of wheat, or oats, or rye, or barley, or buckwheat — nor ever before had occasion to ponder that here in this broken flail was something most ancient, as important to man as the wheel or the axe?

It is not a sad commentary but a true one, not curious but understandable, that the changes of our farm pattern and needs — how and where we should grow things, how to process them for a modern world — affected only a few generations of men whose lives and economy were bent, or broken, to the changing. This boy in a barn knows no more of this — wonders no more at this — than do the birch and the pine that have come back to my grandfather's wheat field.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /	Days.	0 /
1	21s. 46	7	22 35	13	23 08	19	23 25	25	23 24		
2	21 56	8	22 42	14	23 12	20	23 26	26	23 23		
3	22 04	9	22 48	15	23 16	21	23 26	27	23 21		
4	22 13	10	22 54	16	23 19	22	23 27	28	23 18		
5	22 21	11	22 59	17	23 21	23	23 26	29	23 15		
6	22 28	12	23 04	18	23 23	24	23 26	30	23 11		

● New Moon, 1st day, 11 h. 10 m., morning, E.
☽ First Quarter, 8th day, 12 h. 58 m., evening, E.
○ Full Moon, 16th day, 6 h. 22 m., evening, E.
☾ Last Quarter, 24th day, 5 h. 48 m., morning, W.
● New Moon, 30th day, 10 h. 39 m., evening, W.

FOR POINTS OUTSIDE BOSTON SEE KEY LETTER CORRECTIONS — PAGE 16

Day of Year	Day of Month	Day of Week	☺ Rises h. m.	Key	☺ Sets h. m.	Key	Length of Days h. m.	Sun Fast m.	Full Sea. Boston. Morn h	Full Sea. Boston. Eve. h	☽ Rises h. m.	Key	☽ Sets h. m.	Key	☽ Place	☽ Age
335	1	Fr.	6 53	N	4 14	D	9 21	27	$10\frac{1}{4}$	11	$7^{A}_{M}00$	O	$3^{P}_{M}58$	C	SGR	0
336	2	Sa.	6 54	N	4 13	D	9 19	26	$11\frac{1}{4}$	$11\frac{3}{4}$	8 18	P	4 51	B	SGR	1
337	3	A	6 55	N	4 13	D	9 18	26	—	0	9 27	P	5 55	B	CAP	2
338	4	M.	6 56	N	4 13	D	9 17	25	$0\frac{3}{4}$	1	10 22	P	7 08	C	CAP	3
339	5	Tu.	6 57	N	4 13	D	9 16	25	$1\frac{1}{2}$	$1\frac{3}{4}$	11 04	O	8 21	D	AQR	4
340	6	W.	6 58	N	4 13	D	9 15	25	$2\frac{1}{2}$	$2\frac{3}{4}$	$11^{A}_{M}36$	N	9 33	E	AQR	5
341	7	Th.	6 59	N	4 12	D	9 14	24	$3\frac{1}{2}$	$3\frac{1}{2}$	$12^{P}_{M}01$	L	10 41	F	PSC	6
342	8	Fr.	7 00	N	4 12	D	9 13	24	$4\frac{1}{2}$	$4\frac{1}{2}$	12 22	K	$11^{P}_{M}46$	H	PSC	7
343	9	Sa.	7 01	N	4 12	D	9 12	23	$5\frac{1}{4}$	$5\frac{1}{2}$	12 41	J	—	—	PSC	8
344	10	A	7 02	N	4 12	D	9 11	23	$6\frac{1}{4}$	$6\frac{1}{2}$	1 00	H	$12^{A}_{M}48$	I	ARI	9
345	11	M.	7 03	O	4 12	C	9 10	22	7	$7\frac{1}{2}$	1 18	G	1 48	J	ARI	10
346	12	Tu.	7 03	O	4 13	C	9 09	22	8	$8\frac{1}{4}$	1 37	F	2 50	L	TAU	11
347	13	W.	7 04	O	4 13	C	9 09	21	$8\frac{1}{2}$	9	1 59	E	3 53	M	TAU	12
348	14	Th.	7 05	O	5 13	C	9 08	21	$9\frac{1}{4}$	$9\frac{3}{4}$	2 27	C	4 57	N	G'M	13
349	15	Fr.	7 06	O	4 13	C	9 07	21	10	$10\frac{1}{2}$	3 00	B	6 02	P	G'M	14
350	16	Sa.	7 06	O	4 13	C	9 07	20	$10\frac{1}{2}$	$11\frac{1}{4}$	3 41	B	7 05	P	G'M	16
351	17	A	7 07	O	4 14	C	9 07	20	$11\frac{1}{4}$	—	4 32	A	8 04	A	—	—
352	18	M.	7 08	O	4 14	C	9 06	19	0	0	5 31	B	8 51	P	CNC	17
353	19	Tu.	7 08	O	4 14	C	9 06	19	$0\frac{1}{2}$	$0\frac{1}{2}$	6 38	B	9 40	P	CNC	18
354	20	W.	7 09	O	4 15	C	9 06	18	$1\frac{1}{4}$	$1\frac{1}{4}$	7 48	D	10 15	O	LEO	19
355	21	Th.	7 10	O	4 15	C	9 06	18	2	2	9 00	E	10 45	M	LEO	20
356	22	Fr.	7 10	O	4 16	C	9 06	17	$2\frac{3}{4}$	3	10 12	G	11 10	L	VIR	21
357	23	Sa.	7 11	O	4 16	C	9 06	17	$3\frac{1}{2}$	$3\frac{3}{4}$	$11^{P}_{M}24$	H	11 32	J	VIR	22
358	24	A	7 11	O	4 17	C	9 06	16	$4\frac{1}{2}$	$4\frac{3}{4}$	—	—	$11^{A}_{M}54$	I	LIB	23
359	25	M.	7 11	O	4 18	C	9 06	16	$5\frac{1}{2}$	$5\frac{3}{4}$	$12^{A}_{M}37$	J	$12^{P}_{M}16$	G	LIB	24
360	26	Tu.	7 12	O	4 18	C	9 06	15	$6\frac{1}{4}$	$6\frac{3}{4}$	1 53	K	12 41	F	SCO	25
361	27	W.	7 12	O	4 19	C	9 07	15	$7\frac{1}{4}$	$7\frac{3}{4}$	3 11	M	1 10	D	SCO	26
362	28	Th.	7 12	O	4 20	C	9 07	14	$8\frac{1}{4}$	$8\frac{3}{4}$	4 31	N	1 47	C	SGR	27
363	29	Fr.	7 13	O	4 20	C	9 08	14	9	$9\frac{3}{4}$	5 51	P	2 34	B	SGR	28
364	30	Sa.	7 13	O	4 21	C	9 08	13	10	$10\frac{3}{4}$	7 05	P	3 33	B	CAP	29
365	31	A	7 13	O	4 22	C	9 09	13	11	$11\frac{1}{2}$	$8^{A}_{M}06$	P	$4^{P}_{M}42$	B	CAP	1

DECEMBER hath 31 days. [1967

See, bursting from the northern skies,
November's fierce successor rise;
Lo! devastation makes his way,
Oaks with a bow confess his sway.

D.M.	D.W.	Aspects, Holidays, Heights of High Water, Weather, etc.	Farmer's Calendar.
1	Fr.	Two new moons (1st-30th) mean a cold spell you'll remember.	*Gut-*
2	Sa.	Time to cut St. Barbara's branches for Xmas creches	*ters stutter.*
3	A	**Advent $.** ☾ rides low {—/11.6}	*Clouds*
4	M.	Kill pork and beef • Nat'l Grange fd. 1867 {9.6/11.2}	*scurry,*
5	Tu.	*Suspicion is no great fault unless you show it* ☌☌☾	*snows*
6	W.	St. Nick. • Don't marry bet. Dec. 3 & Jan. 13 {9.0/10.0}	*flurry.*
7	Th.	Pearl Harbor • Earliest sunsets (7-11)	*3 weather*
8	Fr.	Conception Virgin Mary • Wash. crossed Delaware 1776	*breeders*
9	Sa.	[10th ♄ Stat. in R.A. ♄ occulted]	*(it's a cinch)*
10	A	**2nd S. A.** ☾ on Eq. ☌♄☾	*bring snow*
11	M.	Laughing Gas first used for tooth extraction 1844 {8.6/8.0}	*of more*
12	Tu.	☾ in Apo. Heavy Meteor Showers (12, 22, 23)	*than 1".*
13	W.	St. Lucy Grandma Moses died 1961	*Near clear,*
14	Th.	Geminis rendezvous 1965 Tides {9.2/8.1}	*then*
15	Fr.	Bill of Rights • Gemini Rendezvous 1965 {9.4/8.2}	*more*
16	Sa.	Full Hunters Moon 6.22 P.M. • Missouri quake 1811	*snow,*
17	A	**3rd S. A.** ☾ runs high {9.7/8.3}	*we fear.*
18	M.	Shortest Days (18-26) • Dangerous evil day {—/9.7}	*Sun's*
19	Tu.	B.C. 62 Caesar repudiated his wife Pompeia {8.3/9.8}	*bright,*
20	W.	Ember Days 20, 22, 23 • 12 cons. rainy Sats. to here-1959	*but*
21	Th.	Forefathers' Day [22nd ♅ Stat. in R.A. ☌♅☾]	
22	Fr.	Winter begins 8:17 A.M.	*cold as night.*
23	Sa.	*In the same case to others do as you would they should to you*	*Christ-*
24	A	**4th S. A.** ☾ on Eq. ☌☉☾	*mas is*
25	M.	**Christmas D.**	*white; Old Abe*
26	Tu.	St. Stephen 38 Sioux Indians hanged Minn. 1862	*was*
27	W.	St. John Hanukah [28th ☌☿☉ Sup. ☌♀♆]	*right.*
28	Th.	Childermas • ☾ in Peri. • ☌♀☾ • ☌♆☾	*A*
29	Fr.	Dartmouth College chartered 1767	*storm (or worse)*
30	Sa.	Boston forbid Masq. Balls 1809 ☾ rides low	*may burst*
31	A	1st S. a. Ch. Happy New Year	*on the 31st.*

"Put your sleds and sleighs in order."

And high time, too. Look to them indeed: your good all-purpose pung, your rugged wood sled, but first look to "Crumbs of Comfort," your Sunday-Go-To-Meeting sleigh — and your Grange sleigh with the town's coat-of-arms.

Yes, we remember — you especially, grandma and grandpa, this Sunday morning after church — whisking down Main Street and out to The Corners — a very proud and elegant couple in "Crumbs," so golden on the snowy white road — and you showing off a bit to your friends, and they to you in their own proud turn-outs. How secure and comfy you looked, grandma, under the buffalo robe, coy in your tippet and little fur hat — and you, grandpa, how grand and glowing, with your white whiskers streaming away, and the obedient reins secure in your fine black driving gloves. And little dappled Molly — you, and not least you; perky, independent, high-stepping (as if grandpa needed any rein to you — but let him think so).

And then, of course, us — we youngsters, with our independence, headed off after church to different parts for different reasons. We in the pung behind Ben or Dan, all of us spraddled out with our backs to the sideboards, feet in the sun-warm straw, our sleds and the horse blanket any-which-way in the middle. Off to Cranch Hill for coasting. Off to the top of the morning. The top of the world.

VENUS, MARS, JUPITER, AND SATURN, 1967
MORNING AND EVENING STARS, TOO

Below are given the times of the rising or setting of the Planets named, on the first, eleventh and twenty-first of each month. The time of the rising or setting of any one of said Planets between the days named may be found with sufficient accuracy by interpolation. For explanation of keys (used in adjusting times given to your town) see page 16. Keys appear below in capital letters.

(A Planet is called Morning Star so long as it appears nearer the Sun to the Sun's right, or west of it, and so is above the horizon at sunrise. It is called Evening Star so long as it appears nearer the Sun to the Sun's left, or east of it, and so is above the horizon at sunset. The change from the one to the other occurs precisely when the Planet comes closest to aligning with the Earth and Sun, either on the side of the Earth away from the Sun, when it is said to be in Opposition to the Sun, or on the same side of the Earth as the Sun, in Conjunction with the Sun.

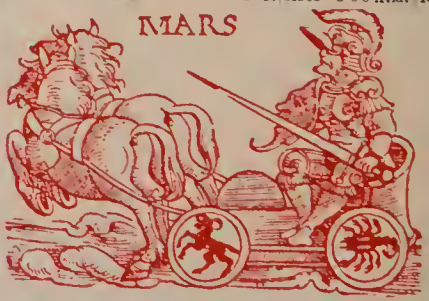
Mercury and Venus, the orbits of which lie inside the Earth's orbit about the Sun, are the only Planets which can never be in Opposition, but only in Conjunction, aligning either between the Earth and the Sun at Inferior Conjunction or on the far side of the Sun at Superior Conjunction. They become Morning Stars when they pass Inferior Conjunction, Evening Stars when they pass Superior Conjunction. When either of these two Planets appears at its greatest angular distance from the Sun, it is said to have reached Greatest Elongation.

The other Planets become Evening Stars when they pass Opposition, Morning Stars when they pass Conjunction.

VENUS

Venus is an Evening Star until it reaches Inferior Conjunction on August 29th. Thereafter it is a Morning Star for the balance of the year. It attains its greatest elongation (45°) east of the Sun on June 20th and its greatest brilliance during the year on and about July 24th and again on or about October 6th, when it will be about twelve times brighter than the brightest star.

Jan	1st	sets	5 19 P.M.	D	May	1st	sets	10 11 P.M.	P	Sep	1st	rises	5 06 A.M.	H
	11th	"	5 44 P.M.	D		11th	"	10 25 P.M.	P		11th	"	3 59 A.M.	H
	21st	"	6 09 P.M.	E		21st	"	10 33 P.M.	P		21st	"	3 10 A.M.	G
Feb	1st	sets	6 38 P.M.	F	Jun	1st	sets	10 32 P.M.	O	Oct	1st	rises	2 37 A.M.	G
	11th	"	7 03 P.M.	H		11th	"	10 25 P.M.	N		11th	"	2 21 A.M.	G
	21st	"	7 28 P.M.	I		21st	"	10 11 P.M.	M		21st	"	2 15 A.M.	H
Mar	1st	sets	7 48 P.M.	J	Jul	1st	sets	9 51 P.M.	L	Nov	1st	rises	2 19 A.M.	H
	11th	"	8 12 P.M.	K		11th	"	9 26 P.M.	K		11th	"	2 28 A.M.	I
	21st	"	8 37 P.M.	L		21st	"	8 54 P.M.	K		21st	"	2 41 A.M.	J
Apr	1st	sets	9 04 P.M.	M	Aug	1st	sets	8 11 P.M.	J	Dec	1st	rises	2 57 A.M.	J
	11th	"	9 28 P.M.	N		11th	"	7 23 P.M.	I		11th	"	3 15 A.M.	K
	21st	"	9 51 P.M.	O		21st	"	6 27 P.M.	I		21st	"	3 35 A.M.	L
											31st	rises	3 56 A.M.	M



MARS

Mars continues as an Evening Star until April 15th, when it comes to opposition. For the year's balance it will be a Morning Star. Its nearest approach to the earth during the year is on April 21st when it will be 55,894,000 miles distant from the Earth.

Jan	1st	rises	12 09 A.M.	J	May	1st	sets	4 03 A.M.	H	Sep	1st	sets	9 14 P.M.	D
	11th	"	11 50 P.M.	J		11th	"	3 15 A.M.	H		11th	"	8 55 P.M.	D
	21st	"	11 31 P.M.	J		21st	"	2 31 A.M.	H		21st	"	8 38 P.M.	C
Feb	1st	rises	11 08 P.M.	K	Jun	1st	sets	1 45 A.M.	H	Oct	1st	sets	8 24 P.M.	C
	11th	"	10 43 P.M.	K		11th	"	1 08 A.M.	H		11th	"	8 13 P.M.	C
	21st	"	10 15 P.M.	K		21st	"	12 32 A.M.	G		21st	"	8 04 P.M.	C
Mar	1st	rises	9 47 P.M.	K	Jul	1st	sets	11 55 P.M.	G	Nov	1st	sets	7 58 P.M.	C
	11th	"	9 09 P.M.	K		11th	"	11 25 P.M.	G		11th	"	7 55 P.M.	C
	21st	"	8 24 P.M.	K		21st	"	10 56 P.M.	F		21st	"	7 53 P.M.	C
Apr	1st	rises	7 28 P.M.	K	Aug	1st	sets	10 26 P.M.	F	Dec	1st	sets	7 53 P.M.	D
	11th	rises	6 32 P.M.	K		11th	"	10 01 P.M.	E		11th	"	7 54 P.M.	D
	21st	sets	4 52 A.M.	H		21st	sets	9 38 P.M.	E		21st	"	7 56 P.M.	E
											31st	"	7 57 P.M.	F

JUPITER

Jupiter is in opposition on January 20th when it will be approximately 395 million miles from the earth. Prior to that date it will be a Morning Star, after that date an Evening Star until it comes to conjunction on August 8th. Thereafter it is a Morning Star again for the rest of the year.

JAN 1st	rises	5 54 P.M.	D	MAY 1st	sets	12 34 A.M.	N
11th	rises	5 09 P.M.	D	11th	"	11 58 P.M.	N
21st	sets	7 14 A.M.	N	21st	"	11 24 P.M.	N
FEB 1st	sets	6 26 A.M.	N	JUN 1st	sets	10 46 P.M.	N
11th	"	5 44 A.M.	N	11th	"	10 13 P.M.	N
21st	"	5 01 A.M.	N	21st	"	9 39 P.M.	N
MAR 1st	sets	4 27 A.M.	N	JUL 1st	sets	9 06 P.M.	N
11th	"	3 46 A.M.	N	11th	"	8 33 P.M.	N
21st	"	3 06 A.M.	N	21st	"	8 00 P.M.	M
APR 1st	sets	2 24 A.M.	N	AUG 1st	sets	7 24 P.M.	M
11th	"	1 46 A.M.	N	11th	rises	4 35 A.M.	E
21st	"	1 09 A.M.	N	21st	rises	4 07 A.M.	E

SEP 1st	rises	3 36 A.M.	E
11th	"	3 08 A.M.	E
21st	"	2 39 A.M.	F
OCT 1st	rises	2 10 A.M.	F
11th	"	1 40 A.M.	F
21st	"	1 10 A.M.	F
NOV 1st	rises	12 35 A.M.	F
11th	"	12 02 A.M.	F
21st	"	11 25 P.M.	F
DEC 1st	rises	10 49 P.M.	F
11th	"	10 13 P.M.	G
21st	"	9 34 P.M.	G
31st	rises	8 54 P.M.	G

SATURN

Saturn is an Evening Star until it comes to conjunction on March 23rd. Thereafter, until it reaches opposition on October 2nd, it is a Morning Star before becoming an Evening Star again on that date for the rest of the year. At opposition, when it is nearest the earth during the year, it will lie about 775 million miles away.

JAN 1st	sets	10 32 P.M.	H	MAY 1st	rises	3 32 A.M.	I
11th	"	9 56 P.M.	H	11th	"	2 56 A.M.	I
21st	"	9 21 P.M.	H	21st	"	2 19 A.M.	I
FEB 1st	sets	8 43 P.M.	H	JUN 1st	rises	1 38 A.M.	H
11th	"	8 09 P.M.	H	11th	"	1 00 A.M.	H
21st	"	7 36 P.M.	I	21st	"	12 22 A.M.	H
MAR 1st	sets	7 09 P.M.	I	JUL 1st	rises	11 41 P.M.	H
11th	"	6 29 P.M.	I	11th	"	11 02 P.M.	H
21st	sets	5 56 P.M.	I	21st	"	10 23 P.M.	H
APR 1st	rises	5 26 A.M.	I	AUG 1st	rises	9 40 P.M.	H
11th	"	4 45 A.M.	I	11th	"	9 02 P.M.	H
21st	rises	4 09 A.M.	I	21st	rises	8 21 P.M.	H

SEP 1st	rises	7 36 P.M.	H
11th	"	6 56 P.M.	H
21st	"	6 15 P.M.	I
OCT 1st	rises	5 34 P.M.	I
11th	sets	5 08 A.M.	I
21st	"	4 25 A.M.	I
NOV 1st	sets	3 38 A.M.	I
11th	"	2 56 A.M.	I
21st	"	2 14 A.M.	I
DEC 1st	sets	1 34 A.M.	I
11th	"	12 54 A.M.	I
21st	"	12 16 A.M.	I
31st	sets	11 38 P.M.	I

MERCURY

Mercury is most easily seen when near its greatest elongation. For observation just after sundown the best dates will be on and about February 16, June 12, and October 8, (the dates of its greatest eastern elongation), when it will set 1 h. 34 m., 1 h. 47 m., and 45 m., respectively after the sun. For observation just before sunrise, the best dates will be those on and about March 31, July 29, and November 17, (the dates of its greatest western elongations), when it will rise 51 m., 1 h. 28 m., and 1 h. 43 m. respectively before the sun. Mercury will be in Superior Conjunction on January 17, May 11, August 24 and December 18, and in Inferior Conjunction on March 4, July 9, and November 1.

OCCULTATIONS OF SATURN

Three occultations of Saturn by the Moon, visible to the naked eye of observers in the United States, will occur during 1967.

October 16, 1967: This occultation will be visible, near or after sunset, to most observers in the Eastern and Central Standard Time zones. Its beginning will occur within the hour starting at 5 P.M. E.S.T. (4 P.M. C.S.T.); the exact time depends upon the observer's location. Its ending will be generally visible to observers as far west as the Rockies. Saturn will be hidden by the Moon for about 50 minutes.

November 12, 1967: This occultation, both its beginning and ending, will be generally visible to observers in the Mountain and Pacific Standard Time zones, and in Alaska. Its beginning will occur around 8 P.M. M.S.T. (7 P.M. P.S.T.). Saturn will emerge from behind the Moon slightly more than an hour later for most observers.

December 20, 1967: This occultation will be visible to observers in the Alaskan and Bering Standard Time zones. Its beginning will be around midnight (Dec. 9-10) A.S.T. (11 P.M. December 9th B.S.T.) and its ending will occur about 40 minutes later.

"FLYING SAUCERS" OR "FAIRY RINGS"?

"Flying saucers" are not exclusive with this generation. We have had many reports about these. Aviators, postmasters, housewives, automobilists—in fact, they have been reported during the last twenty years from almost every walk of life. In many instances, that which had been thought to be a flying saucer has, upon investigation, turned out to be an optical illusion, a satellite, a weather balloon, a reflection, or something readily explained. It seems unfortunate, however, to classify flying saucers with the black panthers and the sea serpents, both of which are rooted in mistaken identification or in the minds of those fond of spoofs. To be sure, a certain percentage of those reporting saucers are also spoofing or too credible. However, it must be granted, whatever their identity is (no one really knows), these flashes of light in circular form have not only been recorded by scientists of the highest standing for the past 150 years but also have left their clearly visible marks on various fields, or forests, upon the earth.

"So from dark clouds the playful lightning springs,
Rives the firm oak or PRINTS THE FAIRY-RINGS."

This couplet is taken from the *Botanic Garden*, a long poem (1789) by Erasmus Darwin (1731-1802), grandfather of the eminent English naturalist, Dr. Charles Darwin. The Fairy-Ring, illustrated above, was sketched at Shrewsbury, England, the birthplace of the latter. His explanation of it is found in a footnote towards the end of the poem on Page 26, note xiii.

"There is a phenomenon, supposed to be electric, which is yet unaccounted for; I mean the Fairy-rings, as they are called, so often seen on the grass. The numerous flashes of lightning which occur every summer are, I believe, generally discharged upon the earth, and but seldom (if ever) from one cloud to another. Moist trees are the most frequent conductors of these flashes of lightning, and I am informed by purchasers of wood that innumerable trees are thus cracked and injured. At other times larger parts or prominences of clouds gradually sinking as they move along, are discharged on the moister parts of grassy plains. Now this knob or corner of a cloud, in being attracted by the earth will become nearly cylindrical, as loose wool would do when drawn out into a thread, and will strike the earth with a stream of electricity perhaps two or ten yards in diameter. Now as a stream of electricity displaces the air it passes through, it is plain no part of the grass can be burnt by it, but just the external ring of this cylinder, where the grass can have access to the air; since without air nothing can be calcined. This earth after

having been so calcined becomes a richer soil, and either funguses or a bluer grass for many years mark the place. That lightning displaces the air in its passage is evinced by the loud crack that succeeds it; which is owing to the sides of the aerial vacuum clapping together when the lightning is withdrawn. That nothing will calcine without air is well understood, from the acids produced in the burning of phlogistic substances, and may be agreeably seen by suspending a paper on an iron prong, and putting it into the centre of the blaze of an iron furnace; it may be held there some seconds, and may be again withdrawn, without its being burnt, if it be passed quickly into the flame and out again, through the external part of it which is in contact with the air. I know some circles of many yards diameter of this kind near Foremark, in Derbyshire, which annually produce large white funguses and stronger grass; and have done so, I am informed, above thirty years. This increased fertility of the ground by calcination or charring, and its continuing to operate so many years, is well worth the attention of the farmer; and shews the use of paring and burning new turf in agriculture, which produces its effect, not so much by the ashes of the vegetable fibres, as by charring the soil which adheres to them.

"Those situations, whether from eminence or from moisture, which were proper once to attract and discharge a thunder-cloud, are more liable again to experience the same. Hence many fairy-rings are often seen near each other, either without intersecting each other, as I saw this summer in a garden in Nottinghamshire, or intersecting each other, as described on Arthur's seat, near Edinburgh, in the Edinb. Trans. Vol. II p. 3."

In quoting the above, it may not be amiss to add that in the summer of 1965 a similar Fairy-ring was discovered at Jaffrey, New Hampshire and reported fully in the local *Monadnock-Ledger* as having been left there by a Flying Saucer. The ring, apparently, had been made by the Saucer, at or close to the time when several Jaffrey residents reported they had seen the Saucer close to its location.

RAPID DISORGANIZATION OF THE HUMAN BODY

On the night of the 16th of March, 1802, in one of the towns of the state of Massachusetts, the body of an elderly woman evaporated and disappeared from some internal and unknown cause, in the duration of about one hour and an half. Part of the family had gone to bed, and the rest were abroad. The old woman remained awake to take care of the house. By and by one of the grand-children came home, and discovered the floor near the hearth to be on fire. An alarm was made, a light brought, and means taken to extinguish it. While these things were doing, some singular appearances were observed on the hearth and the contiguous floor. There was a sort of greasy soot and ashes, with remains of a human body, and an unusual smell in the room. All the clothes were consumed; and the grandmother was missing. It was at first supposed she had, in attempting to light her pipe of tobacco, fallen into the fire, and been burned to death. But on considering how small the fire was, and that so total a consumption could scarcely have happened if there had been ten times as much, there is more reason to conclude that this is another case of that spontaneous decomposition of the human body, of which there are several instances on record. It is to be regretted the particulars have not been more carefully noted.

THE COMET IKEYA-SEKI

discovered in September 1965 by two Japanese astronomers, came in full view of Japanese and mid-Pacific observers on October 25, 1965. Good photographs of it were taken by the Smithsonian Astrophysical Observatory at Woomera, Australia. Other scientists, jet propelled from the NASA Ames Research Center, were foiled by the proximity of the comet and its 4-million-mile-long tail to the brilliance of the sun. It did not collide with the sun or do anything much but disappear.

OUTDOOR PLANTING TABLE, 1967

The best time to plant all flowers, and vegetables which bear their crops *above* ground (peas, beans, etc.), is during the LIGHT of the moon. The LIGHT of the moon begins (see pages 24 to 46) with the exact moment the moon is NEW and ends the exact moment the moon is FULL. For vegetables which bear crops *below* ground (parsnips or potatoes), the best time to plant is in the DARK of the moon. The DARK of the moon begins the exact moment (see pages 24 to 46) the moon is FULL and ends the exact moment the moon is NEW. These "moon" planting dates for 1967 are given below in the columns headed "Moon Most Favorable." Estimated seasonal limits without reference to the moon are given in the columns headed "Plant Anytime".

Those who wish to plant also in the most favorable Sign should consult the Moon's Place, next to last column on pages 24 to 46. After learning the "most favorable" dates below, consult the Moon's Place column and determine on which day or days of those given below the Signs ARI, CNC, LIB, AQR, and PSC appear. These days are best for planting flowers and above-ground crops. TAU is the only good sign for below-ground vegetables.

For your particular locality, find the latitude of your town (see pages 91-108). For every 500 feet above sea level, plant one week later than the dates given below. If your latitude is halfway between those given, your planting dates will be halfway between those given below.

Above Ground Crops Marked (*) Plant Bet. New and Full Moon—All Others Bet. Full and New E means Early, L means Late.	42°21′44″ Boston Latitude		39°56′58″ Phila. Latitude		33°45′10″ Atlanta Latitude	
	Plant Anytime Between Dates Below	Moon Most Favorable Between	Plant Anytime Between Dates Below	Moon Most Favorable Between	Plant Anytime Between Dates Below	Moon Most Favorable Between
*Barley	5-15/6-21	5, 15-23	3-15/4-7	3, 15-25	2-15/3-7	2, 15-24
*Beans (E)	5-7/6-21	5, 9-23	4, 15-30	4, 15-24	3-15/4-7	3, 15-25
(L)	6-15/7-15	6, 15-21	7, 1-21	7, 7-21	8, 7-30	8, 7-19
Beets (E)	5, 1-15	5, 1-8	3-15/4-3	3-26/4-3	2, 7-29	2, 25-29
(L)	7-15/8-15	7-22/8-4	8, 15-30	8, 20-30	9, 1-30	9, 19-30
*Broccoli (E)	5, 15-30	5, 15-23	3, 7-30	3, 10-25	2-15/3-15	2, 15-24
(L)	6-15/7-7	6, 15-21	8, 1-20	8, 5-19	9, 7-30	9, 7-18
*Brussels Spr.	5, 15-30	5, 15-23	3-7/4-15	3, 10-25	2-11/3-20	2, 11-24
*Cabbage Pl. (E)	5, 15-30	5, 15-23	3-7/4-15	3, 10-25	2-11/3-20	2, 11-24
(L)	6-7/7-7	6, 8-21	7-1/8-7	7, 7-21	8, 15-30	8, 15-19
Carrots (E)	5, 15-30	5, 24-30	3, 7-31	3, 7-9, 26-31	2-15/3-7	2-25/3-7
(L)	6-15/7-21	6-22/7-6	7, 7-30	7, 22-30	8-1/9-7	8-20/9-3
*Cauliflower Pl. (E)	5, 15-30	5, 15-23	3-15/4-7	3, 15-25	2-15/3-7	2, 15-24
(L)	6-15/7-21	6, 15-21	7-1/8-7	7, 7-21	8, 7-30	8, 7-19
Celery (E)	5-15/6-30	5-24/6-7	3, 7-30	3, 7-9, 26-30	2, 15-28	2, 25-28
(L)	7-15/8-15	7-22/8-4	8-15/9-7	8-20/9-3	9, 15-30	9, 19-30
*Corn, Sw. (E)	5-10/6-15	5, 10-23	4, 1-15	4, 9-15	3, 15-29	3, 15-25
(L)	6, 15-30	6, 15-21	7, 7-21	7, 7-21	8, 7-30	8, 7-19
*Cucumber	5-7/6-20	5, 9-23	4-7/5-15	4, 9-24	3-7/4-15	3, 10-25
*Eggplant Pl.	6, 1-30	6, 8-21	4-7/5-15	4, 9-24	3-7/4-15	3, 10-25
Endive (E)	5, 15-30	5, 24-30	4-7/5-15	4, 25/5-8	2-15/3-20	2-25/3-9
(L)	6, 7-30	6, 22-30	7-15/8-15	7, 22/8-4	8-15/9-7	8-20/9-3
*Flowers (All)	5-7/6-21	5, 9-23	4, 15-30	4, 15-24	3-15/4-7	3, 15-25
*Kale (E)	5, 15-30	5, 15-23	3-7/4-7	3, 10-25	2-11/3-20	2, 11-24
(L)	7-1/8-7	7, 7-21	8, 15-31	8, 15-19	9, 7-30	9, 7-18
Leek Pl.	5, 15-30	5, 24-30	3-7/4-7	3-26/4-7	2-15/4-15	2-25/3-9
*Lettuce	5-15/6-30	5, 15-23	3, 1-31	3, 10-25	2-15/3-7	2, 15-24
*Melon (Musk)	5-15/6-30	5, 15-23	4-15/5-7	4, 15-24	3-15/4-7	3, 15-25
Onion Pl.	5-15/6-7	5-24/6-7	3, 1-31	3, 26-31	2, 1-28	2, 25-28
*Parsley	5, 15-30	5, 15-23	3, 1-31	3, 10-25	2-20/3-15	2, 20-24
Parsnip	4, 1-30	4, 1-8, 25-30	3, 7-31	3, 26-31	1-15/2-4	1-27/2-4
*Peas (E)	4-15/5-7	4, 15-24	3, 7-31	3, 10-25	1-15/2-7	1, 15-26
(L)	7, 15-30	7, 15-21	8, 7-31	8, 7-19	9, 15-30	9, 15-18
*Pepper Pl.	5-15/6-30	5, 15-23	4, 1-30	4, 9-24	3, 1-20	3, 10-20
Potato	5, 1-15	5, 1-8	4, 1-15	4, 1-8	2-10/3-1	2-25/3-1
*Pumpkin	5, 15-30	5, 15-23	4, 23/5-15	4, 23-24	3, 7-20	3, 10-20
Radish (E)	4, 15-30	4, 25-30	3, 7-31	3, 7-9, 26-31	1-21/3-1	1-27/2-8
(L)	8, 15-30	8, 20-30	9, 7-30	9, 19-30	10, 1-21	10, 19-21
*Spinach (E)	5, 15-30	5, 15-23	3-15/4-20	3, 15-25	2-7/3-15	2, 9-24
(L)	7-15/9-7	7, 15-21	8-1/9-15	8, 5-19	10, 1-21	10, 3-18
*Summer Squash	5-15/6-15	5, 15-23	4-15/5-1	4, 15-24	3-15/4-15	3, 15-25
*Swiss Chard	5, 1-30	5, 9-23	3-15/4-15	3, 15-25	2-7/3-15	2, 9-24
*Tomato Pl.	5, 15-30	5, 15-23	4, 7-30	4, 15-24	3, 7-20	3, 10-20
Turnip (E)	4, 7-30	4, 25-30	3, 15-30	3, 26-30	1-20/2-15	1-27/2-8
(L)	7-1/8-15	7-22/8-4	8, 1-20	8, 1-4	9-1/10-15	9-19/10-2
*Wheat (Winter)	8, 11-15	8, 11-15	9-15/10-20	9, 15-18	10-15/12-7	10, 15-18
(Spring)	4, 7-30	4, 9-24	3, 1-20	3, 10-20	2, 15-28	2, 15-24

PLANTING HINTS

GREEN THUMBS: This expression originated in old Scotland. Experienced farmers there were seen to have green thumbs because they handled so many green pots, the stain from which colored their thumbs. It now applies to anyone who has the knack or art or intuition of making plants do well. It is not an oversimplification to say that those who really love plants and gardens are born with green thumbs—for plants, children, as well as adults and animals, do respond to love.

The planting tables on the opposite page indicate the best planting times for the three major planting latitudes of continental U. S. A. As has been explained there, and worked out for you in the "Moon Most Favorable" columns, the best time to plant flowers or vegetables which bear their crops above ground is in the *light of the moon;* the light of the moon is between the time the moon is new and when it is full. For underground crops, the best time is in the *dark of the moon.* The dark of the moon is after the moon is full until it is new again. Certain astrological signs are more favorable, as noted, than others. These times of the full moon and new moon, as well as the sign for each day, are given on pages 24-46. Plant just before, or in the early part, of a rainy spell.

PREPARATION OF SOIL: A Fall ploughing and harrowing (with manure) is a good idea but not necessary. In the Spring, plough early —let the ground dry — then put on manure and harrow. Rake out all stones and twigs and hardened manure just before you plant. If your garden is on a slope it is a good idea to plant your rows sideways to the slope and make a 12-inch-wide terrace in the center of each row — with the extra dirt on the lower side. This will provide against the washing away of your seed — as well as extra dirt for you to hoe over the roots after your plants are up 6 inches or so. Allow at least 2 feet between rows.

HILLS OR FURROWS: If you are expecting a wet growing season, it is better to plant (particularly corn and potatoes) in mounds or hills a foot or so high and 2 feet wide — 4 plantings to a hill — one on each side of the hill, evenly spaced between the north, east, south, and west. For the corn, run in your thumb up to your palm in each planting, drop in 3 or 4 kernels, and when the plants are 3 inches high, pull out the weaker 2 of the 4, if all 4 come up. You can leave 2 if your soil is rich enough to support them.

For potatoes, put in 2 eye sections in each of the 4 segments of the hill and don't pull up any aftergrowth. Later on, be sure you keep the hills well hilled up so that all roots are covered. Squash, pumpkins, cucumbers, etc., like corn and potatoes, do better in wet weather in hills, 8 seeds to a hill (2 in each segment).

If you are expecting a dry season use furrows about 4 inches deep and plant 2 or 3 seeds together at 6-inch intervals, weed out later to eighteen inches. Potatoes should be at least 12 inches between plants.

Other seeds should be planted just deep enough so they won't wash away — and the little spurs from the seeds when they come up have enough soil to steady them. Peas, for example, do better from 2 inches under the surface than they do from less than that.

WEEDING AND THINNING: Don't get at this too early. Carrots, for example, come up very close together and when up an inch or so are almost impossible to thin. It is better to wait for about a 3-inch growth. By that time your plants will be fairly strong, easier to identify and pull. Many weeds resemble your plants — and are more easily identified when larger. It is best to weed when it is very hot, preferably just before a storm.

SPRAYING: Plants in well-manured gardens, without commercial growth-hastening fertilizer and kept watered, should get along very well without any spray at all. But there are cutworms and other chewing insects which, when noticed, should be controlled with nicotine or arsenic (keep your supply of these poisons up on a rafter out of reach of children). But good hoeing, watering, etc., is more impor-

tant than any spray will ever be. Remember, too, in the black fly season, which is usually when you are planting, to keep well covered — wear gloves, elastic your sleeves to your wrists, aud your slacks or trousers to your ankles, wear a mask, smoke. and be liberal with 606 or some such ointmeut.

FENCING: Woodchucks, raccoous, even field mice, deer, squirrels, and hedgehogs will be watching your garden from the very day you begin it. They love the new pea shoots — they somehow know the exact minute your corn is ripe and steal it all before it is yours. A good watchdog will eliminate the need of a fence. If you don't have one, then fence you must. This comes last — after you have planted. We don't know what to advise — some use electric feucing, others chicken wire, etc. Some add rustling aluminum "flags." We have tried all but have yet to find one which was not, at some point, broken through or down or jumped over.

SCARECROWS, *et al:* The best way to keep out crows is to plant seed which has been treated against these birds. Some say a dead crow hung by a string is good protectiou. Others build imitation men or women. Still others use alumiuum flags or pieces of wavy cloth. There is a belief, too, that if you will plant flowers with strong odors, such as nasturtiums, in between about every fourth row, this is the natural way to keep out insects. Further, we are also told a sprinkling of dried animal blood all around the edge of the garden will keep out the mice, woodchucks, raccoons, etc.

SIZE OF GARDEN: For a family of 4, 12 tomato plants are enough. If your rows are about 50 feet long, 2 rows of corn, one of potatoes, half a row of beets, carrots, swiss chard, spinach, beans, etc. is ample. For lettuce, radishes, squash, pumpkin, cucumbers, one-quarter of a row of each will do. A garden 50' x 50' should be large enough. And remember, a good garden can be a thiug of beauty as well as utility. Take pride in it and you will be well rewarded.

WISDOM FROM THE ANCIENTS

"The Lord hath caused medicine to grow out of the earth and he that is wise will not abhor them for with such doth He heal men and taketh away their pains."

Medicine and the art of healiug were first discovered through the observation of Nature. Man's earliest conclusions were that, basically, the natural effects of sympathy and antipathy, preordained at the beginning of all things, were all one needed to know. Aromatic herbs and sweet-smelling flowers, for example, used against infectious air, acted by repulsion or antipathy; whereas hemlock and poisonous herbs, acting by sympathy, drew into their pores the infectious atoms in the same way horse-radish will draw in vinegar.

From such conclusions, it was thought that rhubarb, and the leaves of senna, would cure melancholy. Serpeuts preserved their sight by fennel, the juice of colewort made a man sober, laudanum would cure toothache, sweet marjoram and nutmeg were good for the head, wormwood for the belly, sulphur for the lungs.

Vegetables were thought to be superior to minerals and, as men studied plants, they further concluded that there was a relation between them and the seven planets as well as a connection betweeu the appearance of the plant and the part of the body it would affect. Thus, plants which in any way resembled the eyes would be good for the eyes; scabiosa, marigold, chamelion, starwort, etc. For the ills of the head, one looked for walnuts and used the oil thereof. Apples or beets were used for the heart. Oil from the shells of sea snails, which resemble ears, was believed to restore hearing. Potatoes and truffles helped the womb, parsnips would restore virility. Fennel and flax, being stringy, would help the nerves. It was thought, too, that the color of plants had a meaniug. Water lilies would help all phlegmatic diseases; yellow purged choler; strawberry juice helped the complexion; sassafras cleared the bladder; bean flowers would bring fertillty.

Plants, as do people, have for each other likes and dislikes. By reason of something like the odor of perspiration, asparagus gets along fondly with penny-royal, fir trees with aconitum, rue with water-lilies, lilies with roses. Just so, roses and onions should be kept far apart, cabbages away from cyclamen, etc. Flowers and herbs have been seen to droop when touched by sweaty hands. Dandelions, pimpernel, oxali are several which when irritated iu this way will actually go into motion.

The sun whose heat was thought to attract this Internal fluid of plants is seen to dilate or contract those like the grenadille (which in good weather will show the time of day), heliotrope, tulip, and

Persian lily. There is a certain kind of clover which, by reason of this effect of the sun, appears white in the morning, purple at noon, and yellow in the evening.

It is the abundance of this fluid in some plants, notably peppermint, roses, lilacs, gardenia, etc., which inspires men and beasts with the desires of love and the want of it in others (skunk cabbage, onions, cabbage, etc.) stops the progress of rising passion.

In this century, when food is so much taken for granted, considerable joy is added to gardening by the realization of how plentiful, if one will only avail one's self of it, the Creator's supply of sustenance, etc., in vegetation is. Peruvian Bark is for allaying fevers, Bread-Fruit from the tree of that name is a substitute for bread. Cinnamon stimulates appetite. Coffee beans and tea leaves provide energy. The juice of the marsh-mallow tree provides flavor, helps hoarseness. Rachel, being barren, craved the mandrake. The nutmeg tree furnishes a fine spice for dessert and is a deterrent against dysentery. Then there is the banana, the grape, the apple. The list is so long no book could conceivably be all-inclusive. Perhaps about all one can conclude is that, in planting your flower or vegetable garden, trees, or shrubs, you will be as close to the natural purposes and rhythm of the Universe as anyone can be — and what is more, in harmony with it. Few miracles are more exciting than the first appearance of a plant from its tiny seed.

ADVICE ON DAYLILIES

Miss Dorothy French, of Houston, Texas makes a successful business of "Top Variety Daylilies." She tells us she would never plant or transplant any of her daylilies in the dark of the moon . . . and espccially not in the last four days before the new moon. Daylilies, their seedlings, and seeds of daylily crosses, seem to do best when planted from the new moon to about the middle of the last quarter. Seeds germinate best during the first quarter.

Daylilies are not bulbs such as tulips, gladioli, etc. They are a fleshy rooted perennial. Some have dormant foliage, some are green all year. They grow all over the world and are most rewarding plants. If you wish to learn more about these plants or gardens of them, you can visit or write her at 2203 Devonshire Lane.

KILLING FROSTS and GROWING SEASONS

Courtesy of U. S. Weather Bureau

City	G.S. (Days)	Last Frost Spring	First Frost Fall
Lander, Wyo.	123	May 18	Sept. 18
Bismarck, N.D.	133	May 11	Sept. 21
Alpena, Mich.	141	May 13	Oct. 1
Helena, Mont.	145	May 7	Sept. 29
Reno, Nev.	145	May 14	Oct. 6
Marquette, Mich.	149	May 13	Oct. 9
Concord, N.H.	149	May 7	Oct. 3
Duluth, Minn.	152	May 6	Oct. 5
Green Bay, Wisc.	157	May 5	Oct. 9
Pocatello, Ida.	160	Apr. 29	Oct. 6
Denver, Colo.	160	May 3	Oct. 10
Pierre, S. Dak.	160	Apr. 30	Oct. 7
Minneapolis	166	Apr. 27	Oct. 10
Detroit, Mich.	170	Apr. 28	Oct. 15
Des Moines, Ia.	171	Apr. 21	Oct. 9
Fort Wayne, Ind.	171	Apr. 25	Oct. 13
Ludington, Mich.	172	May 2	Oct. 21
Albany, N.Y.	174	Apr. 24	Oct. 15
Madison, Wisc.	174	Apr. 26	Oct. 17
Santa Fe, N.M.	177	Apr. 25	Oct. 19
Hartford, Conn.	177	Apr. 20	Oct. 13
Toledo, Ohio	179	Apr. 22	Oct. 18
Portland, Mainc	181	Apr. 19	Oct. 17
Spokane, Wash.	182	Apr. 14	Oct. 13
Parkersburg	184	Apr. 17	Oct. 18
Omaha, Nebr.	184	Apr. 14	Oct. 15
Salt Lake City	185	Apr. 18	Oct. 20
Chicago, Ill.	186	Apr. 16	Oct. 19
St. Joseph, Mo.	191	Apr. 9	Oct. 17
Trenton, N.J.	191	Apr. 16	Oct. 24
Springfield, Mo.	193	Apr. 12	Oct. 22
Boston, Mass.	195	Apr. 14	Oct. 26
Wichita, Kans.	197	Apr. 9	Oct. 23
Cincinnati, Ohio	198	Apr. 8	Oct. 23
Lewiston, Ida.	201	Apr. 6	Oct. 24
Harrisburg, Pa.	202	Apr. 9	Oct. 28
Evansville, Ind.	207	Apr. 5	Oct. 29
Cairo, Ill.	212	Mar. 31	Oct. 29
Richmond, Va.	216	Mar. 31	Nov. 2
Roseburg, Ore.	217	Apr. 8	Nov. 11
Oklahoma City	218	Mar. 30	Nov. 3
Chattanooga.	220	Mar. 29	Nov. 4
Raleigh, N.C.	223	Mar. 27	Nov. 5
Little Rock, Ark.	241	Mar. 18	Nov. 14
El Paso, Tex.	242	Mar. 19	Nov. 16
Tucson, Ariz.	243	Mar. 11	Nov. 9
Macon, Ga.	245	Mar. 14	Nov. 14
Columbia, S.C.	246	Mar. 17	Nov. 18
Montgomery, Ala.	250	Mar. 8	Nov. 13
Shreveport, La.	251	Mar. 6	Nov. 12
Portland, Ore.	251	Mar. 15	Nov. 21
San Bernardino	259	Mar. 8	Nov. 22
Eureka, Calif.	277	Mar. 16	Dec. 18
Del Rio, Tex.	277	Feb. 23	Nov. 27
Sacramento.	283	Feb. 19	Nov. 29
Phoenix, Ariz.	296	Feb. 10	Dec. 3
Yuma, Ariz.	334	Jan. 20	Dec. 20
San Francisco.	350	Jan. 13	Dec. 29
Los Angeles.	*	*	*
Miami, Fla.	*	*	*
San Diego.	*	*	*

*Frosts do not occur every year.

PART TWO

Secrets of the Zodiac & Planets

(Being the interpretation, astrologic, and just for fun, Of all serious scientific data in Part One.)

FAMOUS DEBOWELLED MAN OF THE SIGNS

♈ Aries, head. ARI
Mar. 21-Apr. 19
♉ Taurus, neck. TAU
Apr. 20-May 20
♊ Gemini, arms. G'M
May 21-June 20
♋ Cancer, breast. CNC
June 21-July 22
♌ Leo, heart. LEO
July 23-Aug. 22
♍ Virgo, belly. VIR
Aug. 23-Sept. 22
♎ Libra, reins. LIB
Sept. 23-Oct. 22
♏ Scorpio, secrets. SCO
Oct. 23-Nov. 21
♐ Sagittarius, thighs. SGR
Nov. 22-Dec. 21
♑ Capricornus, knees. CAP
Dec. 22-Jan. 19
♒ Aquarius, legs. AQR
Jan. 20-Feb. 18
♓ Pisces, feet. PSC
Feb. 19-Mar. 20

Man of the Signs used by Abe Weatherwise, 1784

These signs, abbreviated, appear for each day on pages 24-46. Their meaning is given on pages 56-59. The illustrations, pages 57-59, are the actual patterns as seen in the sky by the ancients (see Hygini, Augusti Liberti, 1570).

The ancients believed (but we do not) that from the knowledge of the location of *each planet* in the heavens at the exact hour of one's birth one can foresee what kind of a life a child will have, what are the child's inclinations, and what sort of education will best serve the child. The heavens (called the Zodiac) were divided into 12 sections (called Signs) of about 30 days each. There follow on the next three pages brief resumes of the (ancient) meanings of each Sign by which the lives of those born within the period shown are governed. Those using the meanings of these Signs for themselves should also be guided by the Sign for each day of the year which appears in the next to the last column on pages 24 through 46. For example: if you were born on February 12, your ruling Sign is always Aquarius; but on February 12, 1967 the moon's place in the Zodiac is ARI (Pg. 26). Therefore, for all of this year you will be under the influence of both Aquarius and Aries.

Also please remember that where the following letters appear under each following Sign, these indicate the best times for

A Cutting grass or brush, weeding.
B Cutting and setting posts or timbers.
C Cutting hay, pruning.
D Planting above ground crops.
E Planting root crops, house painting.
F Harvesting crops or herbs.
G Breeding, setting hens, creating, baking.
H Weaning.
I Slaughtering.
J Operations, pulling teeth.
K Hairdos, sheep shearing, buying clothes.
L Business, gambling, taking risks.
M Fishing.
N Travel, marriage, romance.

ARIES

ABBR: "ARI" SIGN: LAMB
Controls the head and face
Belongs to those born Mar. 21-Apr. 19
Ruling Planet, Mars; Birthstone
Jasper, Bloodstone, Aquamarine;
Colors, Red, Green.

Best for D, L, G, F, I.

These males are meek, undecisive, unromantic and not lewd;
At math, refereeing, moderating, and science are good.
The girl is chaste, even-tempered, for better or worse,
Excels at housewifery, town affairs, and being a nurse.

TAURUS

ABBR: "TAU" SIGN: BULL
Controls the throat and neck
Belongs to those born Apr. 20-May 20
Ruling Planet, Venus; Birthstone
Diamond, Sapphire; Color, Blue.

Best for E, K, B, I, F, G.

Tauri are strong, amorous, ambitious, and fickle,
Good athletes, builders, artists — no good with a sickle.
Taurae are independent, courageous and cold,
Good travelers, career gals, love praise we are told.

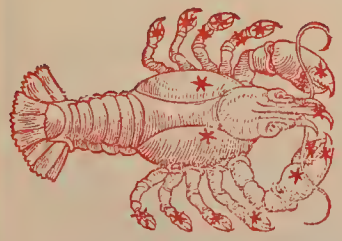
GEMINI

ABBR: "G'M" SIGN: TWINS
Controls shoulders, lungs, arms,
hands, and the nervous system.
Belongs to those born May 21-June 20
Ruling Planet, Mercury; Birthstone,
Emerald; Color, Green.

Best for J, G, L, A, I, F.

These Gemini men understand, imagine, remember.
They make fine husbands, teachers, mechanics, inventors.
She is jealous, fretful, vindictive, but easily appeased;
A good teacher, writer, by her first love most pleased.

CANCER



ABBR: "CNC" SIGN: CRAB
Controls breast and stomach
Belongs to those born June 21-July 22
Ruling Planet, Moon; Birthstone,
Agate, Pearl, Alexandrite, Moonstone;
Color, Blends.

Best for D, M, K, G, I, A, C.

He is serious, faithful, provident, sedate, and tender;
Likes farming, business, anything domestic — better borrower than lender.
The female is cheerful, captious, opinionated, and discreet,
As fine a wife, mother, partner, creator as you'll ever meet.

LEO

ABBR: "LEO" SIGN: LION
Controls the heart
Belongs to those born July 23-Aug. 22
Ruling Planet, Sun; Birthstone,
Turquoise, Ruby; Color, Blue-Red.

Best for K, B, A, F, N.

Turbulent guys, rapacious, unhappy, always quick to sue,
Fine at law, insurance, science, and at gambling too.
The ladies are languid, indiscreet, flippant, and loud,
Fine horsewomen, car racers, athletes, but for love much too proud.

VIRGO

ABBR: "VIR" SIGN: VIRGIN
Controls the lower intestines
Belongs to those born Aug. 23-Sept. 22
Ruling Planet, Mercury; Birthstone,
Carnelian, Peridot, Sardonyx;
Colors, Red-Brown, Green-Yellow.

Best for J, K, L, A, I, F.

Cautious, reserved, romantic, real devils if they dared —
Trustworthy accountants, treasurers — to steal they'd be scared.
The women are warm, modest, clean, and sincere.
Succeed at everything, including a professional career.

LIBRA

ABBR: "LIB" SIGN: SCALES
Controls the loins
Belongs to those born Sept. 23-Oct. 22
Ruling Planet, Venus; Birthstone,
Chrysolite, Sapphire;
Colors, Green-Blue.

Best for D, N, K, G, I.

These boys are respected, truthful, contented, and humble
Fine doctors, politicians, v.i.p.'s — into marriage easily tumble.
The gals are modest, virtuous, prudent, and love to obey;
Good Girl Fridays, homebodies, WACS or WAVES, so they say.

SCORPIO

ABBR: "SCO" SIGN: SCORPION
Controls the generative organs
Belongs to those born Oct. 23-Nov. 22
Ruling Planet, Mars; Birthstone,
Beryl, Opal, Tourmaline;
Color, Blends.

Best for M, G, I, A.

Bad luck, not bright, these men make more enemies than friends
Unless as policemen or explorers their interest bends.
The women are haughty, inconsiderate, designing, full of ambitions,
Work best for the government, as detectives, and are expert dietitians.

SAGITTARIUS

ABBR: "SGR" SIGN: ARCHER
Controls the thighs
Belongs to those born Nov. 23-Dec. 21
Ruling Planet, Jupiter; Birthstone, Topaz; Color, Gold.
Best for J, N, K, F, I, H.

Manly and kind, phlegmatic, furious when misled, and cold.
Become top-flight surgeons, psychiatrists, and sportsmen bold.
The distaff side is gossipy, bossy, scolding, over-demanding in bed.
Does best as a vet, institutional attendant, or kindergarten head.

CAPRICORNUS

ABBR: "CAP" SIGN: GOAT
Controls the knees
Belongs to those born Dec. 22-Jan. 19
Ruling Planet, Saturn; Birthstone, Ruby, Turquoise, Zircon;
Colors, Red-Blue-Green.
Best for J, G, I, H.

Restless, troublesome, weak, dull but amorous lovers;
Fine as ministers, scientists, businessmen and drovers.
The females, however, are timorous, silly, and easily won;
Had best stick to school teaching, home, and from all evil run.

AQUARIUS

ABBR: "AQR" SIGN: WATER BOY
Controls the legs
Belongs to those born Jan. 20-Feb. 18
Ruling Planet, Uranus; Birthstone, Garnet; Color, Dark Red.
Best for D, K, B, I, H, A.

Bad husbands these, fickle, violent, vague, unreliable.
A life as poet, playwright, or artist seems desirable.
She is studious, sedentary, not over-passionate, devout;
A good librarian, wife, and knows what life is about.

PISCES

ABBR: "PSC" SIGN: FISH
Controls the feet
Belongs to those born Feb. 19-Mar. 20
Ruling Planet, Neptune; Birthstone, Amethyst; Color, Purple.
Best for D, M, B, G, I, H, C.

Undependable, selfish, scheming, expert double-crossers,
Choose these men for lawyers, pols, scientists, airfield bossers.
Affectionate, soft, loyal, passionate, you'll find these gals.
Make wonderful wives, teachers, nurses, and just plain pals.

SCIENTIFIC PROGRESS 1965-66

A summary of developments in various fields of endeavor of presumable interest to lay readers. Sources (available on request) are scientific journals published from May 1965 through April 1966.

QUASARS

The knowledge that matter in the universe, to its farthest known reaches, generates and transmits radio signals (in the range from 26 to 8,000 megacycles) began with its startling, accidental discovery by a Bell Telephone engineer, Karl Jansky, in 1931.

Pinpointing these radio sources has very recently unleashed great excitement in astronomical circles. Among the objects pinpointed have been the quasars (shorthand for quasi-stellar objects), a new class of celestial object.

The quasars are among the most distant of all objects of which man has knowledge. The farthermost lies so far distant that the light by which we observe it today departed the quasar 8 billion years ago, long before the estimated time our solar system came into being. This gives astronomers a look farther back in time than they have ever had before. Its light travels close to 48 sextillion miles before it reaches the earth. Other quasars lie between the nearest, at a distance of 1.5 billion light years, and this farthest quasar.

If the distances attributed to the quasars are correct, then the cosmological significance is great. It is believed the "big bang" occurred about 10 billion years ago. The quasar seen today then represents a stage in the evolution of matter within the universe very shortly after its theoretical birth. Such an early stage has never been observed before.

LASERS

The beam produced by a laser is a concentrated shaft of monochromatic light that is purer than that produced by any other light source. The beam's high intensity comes from the exact ranking of the multitude of identical light waves in the shaft as they leave the laser. Each is exactly matched, crest to crest, with all the others, so that the light is said to be coherent rather than jumbled. The greatest intensity produced by any laser currently available has been rated at 100 million times that of a spot of the same size on the sun. Yet one of the men who developed the first commercial laser has recently announced a new one which produces a beam nearly three times brighter than this.

The beam, which can be made narrower than a pin's point breadth as it leaves the laser, fans out so inappreciably as it travels that one such beam, which started out with a pencil's thickness, lighted but a two-mile wide patch on the moon after its travel of 240,000 miles to the moon's surface.

The practical applications seem so numerous and so promising that an estimated thousand and more companies are currently researching commercial uses of the laser. Government, civilian, and military agencies and non-profit organizations are equally exploring its noncommercial applications.

Because of this intensive effort, it is becoming currently common to have a potential, new application announced almost every passing day. They range on the one side from the laser's use in communication to its use by a typist to erase typing errors by evaporating the ink without damaging the paper. It may prove the means of providing three-dimensional color television. It has already been effectively used as a knife for bloodless surgery, prelude to a possibly great future in the medical realm. It has been reported as successfully applied in such diverse ways as truing up sewer lines, piercing the very tiny holes in industrial diamonds through which extremely fine wires are drawn, spotting turbulence in what appears to be absolutely clear air not visible to radar so that smooth flight is more nearly achieved, and providing a highly sensitive and accurate surveying tool. But if the

laser becomes a popular replacement for a pretty girl at ribbon-cutting ceremonies, as it was recently at the University of Colorado, that's more menacing than its prospect as a "death ray."

It is as a means of communication that the laser may most widely serve the world's needs. When devices for modulating a laser's beam in a fashion parallel to that by which a radio wave is modulated to carry speech, music, pictures, codified computer data, to mention a few among the many, the single laser beam will theoretically have the capacity to carry a hundred simultaneous telecasts or more than 100,000 simultaneous telephone conversations.

GUIDED MISSILES

The whole nature of air combat has been changed by the missile which, after launching toward a heat-bearing target, another plane for example, follows that heat source wherever it goes to destroy it. During the first air engagement of the Viet Nam affair, one from an American fighter found its way into the exhaust pipe of its Viet Cong challenger. This missile is now in use by the foot soldier who fires it from a shoulder-held, bazooka-like piece. It gives him unprecedented protection from oncoming attacking airplanes. Sight, pull the trigger, and wait for the plane to disintegrate, since the missile cannot miss. Its name is Redeye.

Other new missiles, in use by the U. S. Navy — named Tartar and Terrier — sense a radar beam reflected from the target and, using their inbuilt computers and steering equipment, race to it. Shipboard computers keep the radar beam on the target. So cooperation between ship and missile breed the target's destruction.

AIR CUSHION VEHICLES

The British Hovercraft, that completely new, wheelless vehicle which rides above land and sea atop an interposed cushion of air passed into commercial operation this year, making Channel crossings. The Navy has its equivalent, called "Charlie Victors," which travel at 60 miles an hour over water, marsh, mud, ice, snow and can top a 4-foot high obstacle. Their usefulness in the Viet Nam conflict is evident, where coastal conditions often thwart passage of a standard vessel even of the shallowest draft.

COMMUNICATIONS

All the information in a 10,000-volume library may soon be transmitted in 15 minutes over a new high-speed PCM system. A system of communication satellites will not only make possible transmission of television into the house directly from any place in the world but also provide delivery of copies of letters anywhere in the world in minutes after they are posted. An orbital or world-wide newspaper will bring detailed news in any language from any place and international business meetings made commonplace by the use of global conference facilities.

Two-way TV systems will soon provide for automatic translation of the speaker's tongue so that if you are to call someone in Japan on your private portable radio-phone, your man or lady at the other end will hear your message in Japanese — and his or her Japanese answer will come back to you in English.

Global networks of computers will, in the 1970's give scholars, businessmen, etc., instant recourse to all known and recorded data on any conceivable subject.

Homes will one day have a single integrated system (probably a screen?) that combines all of the radio, television, book, magazine, and newspaper information scattered about the house today.

GEOGRAPHY

The geographic center of contermenous United States is near Lebanon, Kansas. Mt. McKinley (20,320 ft.) is the highest point in the U.S.A. — Death Valley (—282 ft.) the lowest. Rose Island, nine acres, uninhabited, is the most southernmost land under U.S.A. control

(14°32′ S. — 168°11′ W.). The center of California is near Madera; of Florida, near Brookville; of Illinois, near Springfield; of Massachusetts, in Worcester; of New York, near Oneida; of Georgia, near Macon; and of Texas, near Brady.

The earth is now seen to be shaped like an egg plant — say the satellites.

We know more about the surface of the moon than we do about the interior of the earth. The appareut limit beyond which access is impossible is 1% of the earth's radius (6,400 kilometers). Drill holes thus far have been made down to about five miles — or 1/10 of 1%.

AGE DETERMINATION

Considerable information has been in the press about the determination of the age of archeological and other finds by the use of Carbon 14 tests. In general the theory is that carbon loses a measurable amount of strength over the years. Once the strength of the Carbon content of a find is determined, its age is also approximately known. As the geologic meaning of ages becomes more apparent, Argon, Strontium, Lead, Uranimite, Zircon, and Monazite — and other parents and daughters in the radioactive isotope scheme of decay — will be used for accuracy of not less than 95%.

The oldest known fortified town in the world — says Carbon 14 — just now is Jericho: 6800 B.C.

PSYCHOANALYSIS

Conventional psychoanalysis is gradually being superseded by new techniques. One of these, described by Dr. William Wolf, is the establishment of goals of desirable living: self-fulfillment, inuer freedom, creativity, humor, inuer security, and self-love. To obtain such goals one needs au ability to relax, to become emotionally indifferent (when desirable), to avoid compulsive attachments, to get to the core of a problem, to feed proper ends, to starve the improper, to use senses rather than sensations, and to stress being rather than having.

Jack A. Dorland, in a study of daily moods, has found there is a seven-day cycle among human beings — with the peak falling on a Wednesday, the low on Sunday. In his correspondence with the author John Steinbeck, the latter stated "all human art — literary, taetile, graphic, imaginative — is governed by this built-in rhythm factory." Perhaps, Dorlaud concludes, we are mere pawns of destiny. Mr. A. L. Kunz interprets such a conclusion to mean that the world we feel and sense is just a foreground to a non-material stability and consistency of being.

MEDICAL

Pregnant women, susceptible to German measles, are now being told to avoid contact with babies known to have been exposed to this disease either in *utero* or in the nursery or home.

The most consistently dangerous animal to man is the fly. Of insects, we kill fewer of them than they do of us.

Long jet trips upset the time sense of the human body — cause psychological disruption for 24 hours — abnormal body functions for from three to five days.

Pigs, because they eat almost anything and have the same gastrointestinal tracts as does man — have a similar dental structure, bone mass, body mass, and skin, are the ideal medical research animal. The only thing is they get to weigh too much. This has been overcome by the A.E.C.'s Pacific Northwest Laboratory which now has a breeding herd of 100 "Hanford Miniatures" which stay at between 160–180 pounds.

Entirely artificial hearts powered by Plutonium 238 are now in the "drawing-board" stage. These would be surgically implanted and provide steady electric pulses for the otherwise erratic beat of the patient's heart. In May 1966 an artificial heart was used to sustain a patient's life while his human heart had time to repair itself.

Menopause slows down in women bodily production of the female hormone, estrogen. If estrogen is not replenished, fatty deposits,

wrinkles, facial hair appear. Many women do not avail themselves of estrogen replenisher as they fear it will cause cancer. No more so, says one authority, than the body's own production of estrogen would do.

SUBMARINE AGE

The 1970s will be an Age of Submarine Exploration. By then, vehicles will descend to 20,000 feet with ease. Hundreds of tourists each day will be taken on tours from Miami to under the Gulf Stream at speeds of hundreds of miles per hour. Piccard and Walsh began all this with their seven-mile dive aboard the underwater balloon **Trieste** on Jan. 23, 1960. The **Thresher** disaster spurred further research. Cousteau's Diving Saucer was completed in 1957 — the first research submarine. Since Feb. 2, 1960, after its perfection, it has made hundreds of ocean dives. Piccard's mesoscaph (middle depth boat) was launched in 1964 — and carried more than 20,000 people in its 40-passenger (each with his own porthole) cabin into the depths of Lake Geneva, Switzerland. Piccard plans include a drift in it with the Gulf Stream from Florida to Newfoundland. The Aluminaut, brainchild of J. Louis Reynolds, is a 51-footer which will carry three men to depths of around 15,000 ft. Deepstar III, for three men, will have a depth of around 20,000 ft. The Navy's 60-foot atomic-powered research submarine will be the first research submersible entirely free of mother ships — and completely on its own.

On the Navy's drawing boards is a flying submarine — or submersible aeroplane. The three-jet plane will fly 1000 miles at 300 m.p.h., land on the sea, submerge to a depth of 200 feet, and travel at 10 m.p.h. under water for as long as 10 hours. It can then resurface and take off again as an airplane.

PHOTOGRAPHY

A new photomap technique has been developed by which tree colors and surface elevations will be so clearly marked that an experienced map reader will be able to make his way over photographed areas by vegetation and other information on the photomap.

Cameras, now making simultaneous observation with laser, of satellites, are more accurate range measurers than radar. A Wratten #70 filter is used — with film emulsion which will pick up the laser 6943 angstran light — a laser 10^{20} photon pulse — and expert marksmanship.

Photography at 15 million frames per second has long been possible. However, most of the high-speed picture-taking today falls into the 1-3 million frames per second speed — plenty fast enough for studying fired projectiles, trajectories, recoil, muzzle velocities, and impact measurements.

AURORAL SEASONS

Six years' study of auroras by West German scientists indicate the chances of seeing one are better in March and April and in September and October than at other times of the year.

FOOD PRESERVATION

A peaceful use of atomic energy is that which promises completely new food preservation method, that of radiation processing. The U. S. Army is researching the method for radiation sterilization of foods for long-term storage without refrigeration. The Atomic Energy Commission's successful research is radiation pasteurization of perishables to extend their marketing time, but requiring their post-radiation refrigeration. Food and Drug Administration approval must be cleared before such processed foods will be found in the market.

FROZEN DEATH

There appeared in this Almanac (1943) an article under the above title which purported to quote the diary of a Vermont native. This diary told of the observance by the diarist of a thrifty practice among Vermont farmers of the 19th century — that of freezing up the old people in the early Winter by exposing them, with only the covering of a sheet, to below zero temperature. These old people were then transferred, frozen stiff, to a mountain cave, their bodies covered with spruce boughs, and left to sleep the winter out. Come Spring, the farmer revisited the cave, brought the frozen people into the warm sun — and thawed them to life, ready, good as new, for Spring and Summer chores. As this diary was accepted by so many as the truth and by as many more as the opposite, it soon became, and still is, a popular subject of discussion.

In some localities, notably Vermont and Massachusetts, researchers — unsatisfied to allow such a fascinating story to remain unspoiled — set out to prove "it warn't so." To their own satisfaction, at least, they did just that by proving the diary was fiction contributed verbally by one Allen Morse of Calais, Vermont to a birthday gathering and then transplanted by his granddaughter to a Vermont newspaper on December 21, 1887.

However this may be, this Frozen Death story is for sure not dead yet. Shortly after the "debunking" just mentioned took place, we received a letter from a member of a Maine seafaring family. The letter stated that one of the sea captains of this family had discovered, during one of his voyages to Haiti, a drug which was said to revive the dead and make of their bodies — despite absence of mind and soul — living slaves. The letter mentioned the possibility that this drug had been carried from Haiti to Vermont — and there used for injection into these old people so that they could live in a frozen state throughout the Winter without sustenance. Despite a trip to Haiti and consultation with George C. Simpson, an authority on magical practices in Haiti, we have not been able to confirm the existence of any such drug — much less its importation to Vermont. There exists in Haiti today, however, at least a superstition that this practice is still carried on.

In the meanwhile, the facts of hibernation in Winter by many animals — woodchucks, bats, snakes, etc. — are well known and undisputed. These facts are explained by the reduction in these animals during the Winter sleep of their need for heat or energy while they sleep. Without food, excretion, or perspiration, they live on the very little which the "internal combustion" of their bodies provides. Carried further, it is seen not only among the ancients but also in the present that human beings can survive being fully frozen for at least 96 hours. (Mrs. Goldie Jenkins of Pikeville, Kentucky did just that a few years back.) By imitating animal hibernation, doctors are now performing "impossible" operations through freezing to save eyesight, accident victims, feeble babies, and old folks. This practice is professionally known as hypothermia — the industry of producing ultra-low temperatures as cryogenics.

Various human beings have survived, frozen or not frozen, long periods of fasting. At one extreme is the account of seven Ephesian boys (see **Ecclesiastical History** by Neciphorus, Book 14, Chapter 45). These youths were walled up in a cave during the persecutions of Declus. Three hundred years later, in the days of Theodosius, they were freed, alive and well, from this long sleep. Perhaps the most meticulous account of a fast, beyond the recognized present-day limits of about 30 days, is that contained in a book called the **Non-Such Wonder Of The Peak** published in London, 1689. Herein is described the observations by its author of the suffering and survival of one Martha Taylor without food or sustenance of any kind during the whole year of 1688.

Satisfied in our own minds that survival, without sustenance, is, among animals or human beings, possible for at least as long as a Winter, our attention again reverted to these old people in Vermont to which the diary referred. Even if fictional, where did its author, Allen Morse, find his source for such a story? Nothing, as far as we can discover, was printed in America on this subject up to 1887. However, this country is not as old as are those elsewhere, so perhaps the facts behind it originated abroad.

In this book, the **Non-Such Wonder Of the Peak**, there is a reference on Page 54 which reads as follows:

"The Lucomorians who inhabit the northern mountains, in the most remote parts of Muscovy, near to the Frozen Sea, where the stern Boreas keeps his Blustring Court and hath his Imperial Throne seated; There this People towards the close of November every year, are glad to betake themselves of Dens and Caves, where they lye Frozen up till the grateful influenee of the Vernal Sun awake them out of this cold sleep: of these see Citesius in his Abst. Confol, *pages 57, 103, etc. and Guvagninus in* Moscovia Descript de Lucomor."

Again, on page 61: "Dr. Harvet, who was learned Joubert's Antagonist about the possibility in point of Nature, being reduced to a strait, concerning the **Lucomori**, forementioned whose brumal (winter) fasting he supposed was unquestionable, be granted, 'They did live but it was only a Life of Vegetation?' (Cites. ubi sup. 151)"

Pursuing these two references last fall through Professor Ernest Simmons (Columbia University and Wesleyan) who was in residence at Moscow, we learned that in the Lenin Library in Moscow there is a book by Alesandro Guegnini (Latin Guagninus, Polish Gwagnin) which was published in Verona 1534, in Cracow 1614. Also, **Sarmatiae Europaca descriptio**, Speier, 1581. Included also in **Rerum Polonicareum tomitres**, Frankfurt, 1584. These titles, despite the fact the books do contain the freezing references, were all he could obtain from the scholar at the Lenin Library whom Professor Simmons chose to ask for the translation of the 1687 London reference to the Lucomoriaus. It is doubtful that we can get anything more from the Russians about the Lucomorian natives and their practice of Winter hibernation. Hypothermia is being studied there, we understand, as a means of survival on long trips into outer space . . . and for this reason is highly classified.

In conclusion, we believe that even if the Vermont diary is fiction, 1) the author of it had run across the source of it elsewhere than in his own mind, and 2) the freezing up or hibernation of human beings for the Winter months is not only possible but has been done in Northern Russia and perhaps elsewhere.

Cold weather has long interested those who live in northern climes. As early as 1683, the Hon. Robert Boyle set down some of his notes about it in a book called **New Experiments and Observations Touching Cold.** Those quoted below are taken, in shorthand form, from it for your perusal.

1. The juice of lemons set to freeze in a wide mouth glass will form odd figures — such as trees without leaves on the surface.
2. Many people can easily pass naked from a very hot room, roll in the snow out of doors, and return without ill effects.
3. In Russia in the cold months many people have been seen to drop in the streets and travelers brought in on sleds from the country are seen sitting up dead — frozen stiff.
4. The Dutch explorers in Nova Zembla washed their sheets but it was so cold that when they tried to dry them by the fire the sides next to the fire thawed but the other sides did not.
5. At the siege of Smolensko it was so cold in the fields the spittle of the soldiers would freeze into icicles between their mouths and the ground.
6. Water in Moscow thrown into the air has been seen to be ice before it reaches the ground.
7. Frost penetrates about ten feet into the ground in Greenland, two feet is the deepest it has reached in England, about five feet here.
8. Frozeu meat, cheese, or drink, eggs, apples, etc. should be thawed in cold water. If thawed in hot air they lose taste and nutritional value.
9. Cold, for various reasons, is not registered as accurately by thermometers as by our own senses.
10. Frozen noses, ears, fingers, toes — any part of the human body — should be rubbed with snow or ice — or bathed with very cold water — never thawed in warm temperatures.

FISH AND GAME SUMMARY

(Format copyrighted — must not be copied.)

Based on latest (mostly 1965-66) available laws courtesy of State Fish & Game Commissioners For the most part 1967 laws not released until after press date (June, 1966) and so no attempt is made here at accuracy; in fact, only approximations of the months which may include seasons are given. This table useful only for vacation planning considerations and to satisfy curiosity as to what the various states offer in the way of hunting and fishing. Migratory Bird Regulations are available at any post office.

EXACT DATES, LIMITS, ETC. MUST BE VERIFIED LOCALLY.

STATE / SPECIES	ANTELOPE	BEAR	DEER	MT. GOAT SHEEP	ELK	MINK	MUSKRAT	OPOSSUM	RABBIT	RACCOON	SQUIRREL
Alabama		C	11-12			11-2	11-2	11-2	10-2	10-2	10-1
Alaska		9-6	8-12	8-12	8-12	11-1	11-6		9-4	O	O
Arizona	9	9-2	9-11	12	9-11		O		O	O	9-11
Arkansas			10-1			11-1		11-1	11-1	11-1	9-1
California	C	9-12	8-11	C	C	11-2	11-3	O	9-1	O	11-12
Colorado	P9	4-10	9-12	P8, 11	10-11	11-1	11-4	O	9-2	O	
Connecticut			11-12			C	C		10-1	9-1	10-1
Delaware			11			12-3	12-3	11-1	11-12	11-1	9-10
Florida		11-12	11-12							O	11-2
Georgia		10-2	10-1			11-2	11-2	10-2	11-2	10-2	10-2
Hawaii	C		S	O							
Idaho	S	O	9-12	9	9-12	11-12	11-12		9-2	O	C
Illinois			11, 12P			11-1	11-1	11-1	11-1	11-1	8-10
Indiana			11-12			11-1	11-1	11-1	11-1	11-1	8-10
Iowa			S			11	11-1	11-2	9-2	10-2	9-12
Kansas	C		P12			12-1	12-1	12-1	12-10		X
Kentucky			11			11-1	11-1	11-1	11-1	10	11-12
Louisiana		C	11-1						10-2		10-1
Maine		6-12	10-12			11	11		10-3	8-12	10-11
Maryland		C	9-11			1-3	1-3	9-3	11-1	9-3	10-11
Mass.		10-12	12			11-1	11-12	9-12	10-2	9-12	10-11
Michigan		9-11	10-12		S	10-1	10-1	O	10-2	10-12	10-11
Minnesota		O, S	11			11-12	11-12		10-2	10-12	10-12
Mississippi		C	11-1			12-1	12-2	11-1	10-2	11-1	10-1
Missouri			11			12-1	12-3	11-1	5-2	11-1	5-12
Montana	10-11	3-11	10-11	9-11	10-11	X	X	X	O	O	O
Nebraska	9		11			11-3	11-3	O	O	O	9-1
Nevada	8-9		10-11	12	10-11	11-3	11-3		10		
New Hampshire		9-12	11-12			11-2	11-2		10-3	9-12	10
New Jersey		C	12			12	11-12		11-12	11-12	11-12
New Mexico	9-10	8-11	10-12	X	10-12	12	11-4		O	O	9
New York		11-12	11-12			10-3	10-4	O	10-2	10-3	10-12
Long Island		C	C			1-3	1-3	O	11-3	11-2	11-12
North Carolina		10-12	10-12			11-2	11-2	10-2	11-2	10-2	10-12
N. Dakota	9		9-11	C	C	11-12	C	X	O	O	9-12
Ohio			11S			11-2	11-2	11-2	11-1	11-2	9-11
Oklahoma			S			12-1	12-1	12-1	O	12-1	5-12
Oregon	P8	O	10	P	10-11	11-1	11-2	O	O	O	O
Pennsylvania		11	11		C	11-1	11-3	O	10-1	O	10-1
Rhode Island			10						11-1	10-1	11-12
South Carolina		C	9-12			S	S	S	S	S	S
South Dakota	9	X	11	C	C	11-12	11-12	11-4	S	O	O
Tennessee	X	10-11	11-12	X	X	10-2	12-2	10-2	11-2	10-2	9-12
Texas	9-10	11-12	11-12	C	12	11-1	11-3	O	O	O	S
Utah	P		10-11		P	10-5	O	X	O	X	O
Vermont		9-11	11		C	10-2	10-4	O	10-2	8-12	10
Virginia		11-1	11S		C	12-1	C	10-1	11-1	10-1	9-1S
Washington	C	O	10-11	9	11	11-1	11-3	O	10-2	O	C
West Virginia		11, 12	11-12			11-2	11-2	O	11-1	10-1	10-12
Wisconsin		9-11	9-12			10-1	11-12	11-12	10-1	S	10-1
Wyoming	9-11	4-6, 9-11	9-11	9-11	9-11	11-5P	O	O	9-4	O	O

SPECIALS IN CERTAIN STATES:

ALLIGATOR: Ala. (C), Ga. (6-1); Fla. (6-1); Miss. (C).
WILD BOAR: Cal. (10-3), Fla. (S), N. C. (10-12), Haw. (O), Tenn. (10, 2), Tex. (10)
BUFFALO: Alas. (C), Ariz. (10), Utah (P), Tex. (C)
CARIBOU: Alas. (S), COUGAR: Nev. (O).
IBEX, KUDU, GEMSBOCK: N. Mex. (68)
CHACHALACA: Tex. (12-1)
JAVELINA: Ariz. (2), N. Mex (2), Tex. (11-12)
MOOSE: Alas. (8-11), Idaho (P), Mont. (9-11), Utah (P), Wyo. (9-10)

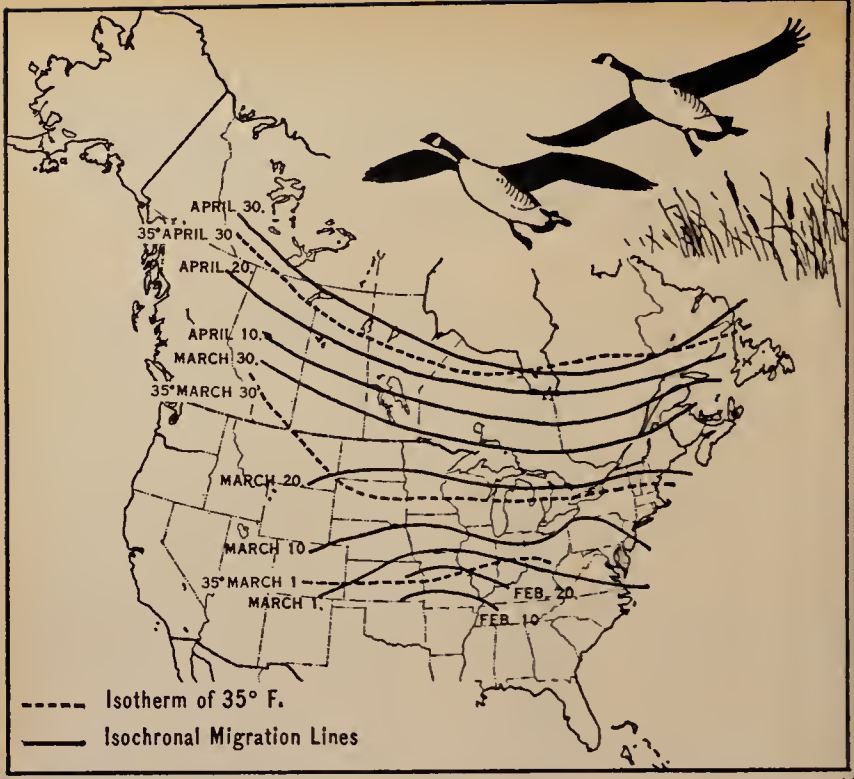
SYMBOLS USED PAGES 66 AND 67

Months: January is represented by the numeral "1" — February by the numeral "2"; etc. Seasons: In the columns under the various animals, birds, and fishes you will note numerals. Thus "12-3" means the season opens in December and closes in March. A number alone means the season opens and closes within that month. Thus "12" alone means the season is December. A number followed by a comma denotes two seasons: thus "9, 12" would mean one September and another in December. "O" means no closed season; "X" not available; "S" special seasons; "C" closed; "P" permit only.

VERIFY EXACT OPENING & CLOSING DATES IN EVERY CASE.

PARTRIDGE GROUSE	PHEASANT	QUAIL	TURKEY	STATE	SPECIES	BASS	CATFISH PERCH SUNFISH CRAPPIE	PIKE PICKEREL	SALMON	BROOK TROUT	LAKE TROUT	WHITEFISH
		11-2	11,12,4	Alabama		O	O	O	O	O	O	O
8-5				Alaska		O	O	O	O	O	O	O
	X	10-1	10	Arizona		O	O			O	O	
C	C	12	4	Arkansas		O	O	O				
9,10-1	11-12	11-12	C	California		O	O	O	2-11	5-10	5-10	5-10
9	11-12	11-12		Colorado		O	O	O	O	O	O	O
10-12	10-12	10	C	Connecticut		4-10	4-10	4-10	4-2	4-10	4-10	
10-12	11-12	11-12		Delaware		O	O	O	O	4-11	O	O
		11-2	11-1	Florida		O	O	O	O	O	O	
10-2		11-2	11-1	Georgia		O	O	O	C	4-10	O	
11-1	11-1	11	C	Hawaii		O	O-X-O-X	X	X	X	X	X
9-12	10-12	9-12	C	Idaho		O	O	X	S	6-10	4-11	O
11-12C	11-12	11-12	C	Illinois		O	O	5-11	O	O	O	O
11-12	11-12	11-12	C	Indiana		O	O	O	O	5-8	O	O
11-12	11-12	11-12		Iowa		O	O	5-2		O		
11	11-12	11-12	C	Kansas		O	O	O				
12-1		11-1		Kentucky		O	O	O	O	O	O	O
		11-2	4	Louisiana		O	O	O				
10-11	10-11			Maine		6-9	4-9	4-9	4-9	4-9	4-9	4-9
11-1	11-1	11-1	10-11	Maryland		O	O	4-11	O	4-3	4-3	O
10-11	10-11	10-11	C	Massachusetts		4-2	4-2	4-2	4-10	4-2	4-10	X
10-12	10-11	11	C	Michigan		6-12	O	5-3	C	4-9	O	4-9
10-11	10-11	C	C	Minnesota		5-2	O	5-2	X	4-9	1-9	O
		12-2	4	Mississippi		O	O	O	O	O	O	O
	11	11-1	4	Missouri		5-2	O	O				
9-10	10-11	X	9, 10, 4, 5	Montana		O	O	O	5-11	5-11	5-11	S
9-10	10-1	10-12	10, 11	Nebraska		O	O	O	O	O	O	O
10	11	11	01-11	Nevada		O	O		S	O	O	O
10-12	10	C		New Hampshire		4-10	4-10	4-3	4-9	4-9	1-9	1-9
11-1	11-12	11-2	C	New Jersey		O	O	O	C3-4	C3-4	C3-4	O
9	12	11-12	4-11	New Mexico		O	O	O-X	X	5-11	5-11	X
10-1	10	10	11	New York		6-11	O	5-2	4-9	4-9	4-9	4-9
11-12	11-12	11-12	C	Long Island		6-11	O	5-2	4-9	4-9	4-9	4-9
10-2	11-2	11-2	11-2	N. Carolina		O	O	O		4-9		
9-12	10-12	X	11	N. Dakota		5-12	O	5-2	X	5-2		X
11-1	11-1	11-1	5S	Ohio		O	O	O	O	O	O	O
O	11-12		S	Okla.		O	O	O	O	O	O	O
10-11	10-11	10-11	X	Oregon		O	O	X	4-10	4-10	4-10	O
10-1	10	10	10	Pennsylvania		6-3	5-3	5-3	O	4-9	4-10	O
11-1	11-12	11-12		Rhode Island		4-2	O	4-2		4-2		
S	S		S	So. Carolina		O	O	O	O	3-9		
9-10	10	11	11	So. Dakota		O-S	O-S	O-S	X	O	X	X
11-2	C	11-2	4-5	Tennessee		O	O	O	X	O	X	
C	S	11-1	11-12	Texas		O	O	O	X	X	X	X
9-12	11	11	P	Utah		O	O	O	6-11	6-11	6-11	6-2
10	10	10	10	Vermont		6-11	O	5-3	4-9	4-9	4-9	
11-1	P	11-1	12-1	Virginia		O	O	O	O	4-12	4-12	O
9-12	10-12	10-12	C	Washington		4-10	4-10		O	4-10	4-10	S
10-1	11-12	11-12	10-11	W. Virginia		O	O	O	O	O	O	O
10-11	10-11	S	S	Wisconsin		5-2	O	5-2	X	5-9	1-9	O
10-11	10-11	10-11	10-11	Wyoming		5-10	5-10	5-10	5-10	5-10	5-10	5-10

BLUEGILL: Ind. (O), Mich., Iowa (O), N. M. (O), S. D. (O), Tenn. (O)
BUFFALO: Minn. (O), S. Dak. (O), Tex. (O)
BULL FROGS: Ariz. (6-11), Ark. (4-12), Del. (5-12), Haw. (O), Ida. (6-10), Ill. (6-8), Ia. (O), Ind. (4, 6-10); Kans. (7-9); Mo. (7-11), Neb. (7-10), Nev. (O), N.Mex. (8), Ore. (O), Pa. (7-10), Tenn. (O), Ohio (7-4), W. Va. (6-7), Wis. (5-12)
RAINBOW: Haw. (8-9), N. Mex. (O), Ark. (O)
SHAD: Calif. (O), Conn. (4-6), Del. (3-6), Fla. (1-4), Ga. (1-4), Ia. (O), Md. (3-9), N.H. (1-8), Ore. (O)
STURGEON: Ida. (O), Ia. (O), Mich. (O), S. Dak. (O), Wis. (S)
TERRAPIN: Fla. (X), Pa. (11-3)



Migration of the Canada Goose. The northward movement keeps pace with the advance of Spring. The advance of the 35°-temperature line, as noted above, agrees with the northward movement of the geese. Courtesy: U.S. Fish & Wildlife Service.

THE FASCINATION OF MIGRATION

Elsewhere in this issue (see page 104) we have described at some length the migrations of the Seventeen-Year Locust. Of other migrating insects, butterflies come to mind and how atomic fallout or other hazards are perhaps interfering with the natural cyclical movements north and south of these beautiful migrators.

Man, of course, moves, primarily, for reasons of health or to escape another cold Winter. With birds, beasts, and insects, the motivation seems to be food and sustenance. The Lemmings, or small mice, in Canada, for example, in certain recurring years follow the pattern of the locusts. Buffalo herds, when there were these, used to migrate from mountain to plain and back again every year. The Musk Ox, Reindeer, and Antelope now do the same. The Black Bear, which requires a certain amount of fat for successful hibernation, will also migrate if it does not have, come cold weather, sufficient fat.

Of migrations, however, those of the birds and fishes are perhaps most interesting. Food and sustenance are factors in their annual travels but many feel that propitious weather and places for breeding are of equal importance. Many fishes and birds migrate long before a food supply is exhausted or the cold (hot) weather has begun . . . notably, the salmon and the alewives, the cuckoo and the swift.

The Arctic Tern is probably the champion, as far as distance is concerned, migrator. These remarkable birds disappear from North America, after their young are grown, and a few months later are found in the Antarctic — 11,000 miles away. Night hawks and barn swallows have been known to travel 7,000 miles — from Alaska to Argentina. Fishes, such as salmon, will swim from the rivers of North America to unknown distant points in the sea; the American

eel has been said to leave our shores for breeding grounds near Bermuda.

Birds usually migrate at about 3000 feet above the ground or ocean; their speed of migration is casual — perhaps 100 to 300 miles a day. As they fly at about 50 miles per hour, this is ouly a few hours' travel per day.

Probably because of their size — and formation — Canada Geese are most often noticed. One will often hear Spring heralded with "the geese are flying north," or Fall announced by "the geese are flying south." These birds (see accompanying map) move north and south exactly as does 35° Fahrenheit temperature. This is one of the most regular migrations there is.

No less interesting are the herring, whose native home is in the Arctic. From there they migrate thrice: Spring, Summer, and Fall. They move in a definite order and divide, as they proceed, into bands to visit different locations. In this they are said to be accompanied by the sea ape (**Chimerra monstrosa**) who is King of the Herring. In Norway 20 million of these fish have been taken at a single fishing — the catch has been as high as 400 million. A Dutchman, William Deuhelzoon, is credited with having been the first to salt herring. This was before 1400 A.D. Emperor Charles V visited Deuhelzoon's tomb and in his honor ate an herring on his grave. Smoked herring was first established as an industry at Dieppe in Normandy.

For those who would know more about Bird Migrations, Circular 16, issued by the U. S. Fish and Wildlife Service in 1950, is valuable. It is available from the Superintendent of Documents, Washington D. C. 20025, 35 cents.

STUDY IN DISHABILLE

The maples have disrobed, and though
They wear a negligee of snow,
I doubt if such attire will keep
Them cozy while they try to sleep.

Margaret Fishback

BEST FISHING DAYS,

1967

There are probably more "fishing calendars" sold each year than all the almanacs put together. It is likely that the more mystifying the ingredients of these calendars are, the more popular they become. Almost all agree, however, that fishing is better when 1) the barometer is rising or high; 2) when the moon is between the new and the full; and 3) when the moon is in the astrological sign of Cancer, Pisces or Scorpio. The days listed herewith are days during which two or three of the above are seen to occur.

Jan. 10–16, 23, 24
Feb. 9, 11–14, 20, 21
Mar. 10–13, 19–24
Apr. 9–13, 15–17
May 13, 14, 18–22
June 8–11, 17, 18
July 7–11, 15, 16
Aug. 5, 6, 12–19
Sept. 4–13, 17, 18
Oct. 3–11, 13, 14
Nov. 2–8, 11, 12
Dec. 1–3, 7–9

However, even under the best of conditions, those who know how to catch fish will be far more successful than those who don't. Some, of course, like gardeners with "green thumbs," are born that way. Others have made themselves expert in knowing the best places, hours, tackle, and lures.

Here are a few observations, taken from a room full of fishing books and clippings, which may or may not prove helpful.

Water temperatures between 55°F and 74°F are best.

The clearer the water, the better, preferably with a slight ripple.

South and West winds are the best, or any offshore breeze.

Engraved for The Life of Benjamin Franklin by Alexander A. Anderson

ALL-AMERICAN RECIPE SELECTIONS

by Duncan MacDonald

"America The Beautiful From Sea to Shining Sea" is also America the delicious from coast to coast.

Just as the original members of Plymouth Colony enjoyed the foods of the first Thanksgiving, so did later colonists enjoy the fish, fowl, flesh, and fruit of this outwardly stern, but potentially amiable, continent.

As they moved west, they took their recipes with them, and developed new ones—with the result that now each state prides itself on certain culinary delights.

New England

New Englanders are deservedly proud of their clam chowder. Surely, such mixtures had been simmered and served long before New England ("chowder" derives from the French *chaudicre,* meaning pot or kettle, and *chaud* means hot) but New England clam chowder? Just try it and compare with the foreign *pots au feu!*

New England Clam Chowder

1/4 lb. salt pork, diced
2 medium-sized onions, diced
3 cups potatoes, diced
1/2 tsp. salt
1/4 tsp. pepper
2 cups boiling water
1 quart clams, chopped, with liquor
1 quart milk
2 tbs. butter
1 pint light cream

Cook salt pork in pan until crisp; remove pork and add onions, potatoes, salt and pepper. Saute for 10 minutes. Cover with water and simmer for 15 minutes. Add clams and their liquor. Cook for 20 minutes. Add milk, butter, and cream. Heat and serve.

Maine

People who live way up in Maine (it's just a step away from Canada!) seem confusing to some of us when they call themselves "Down Easters," but there is no quibbling about their mastery in the trapping of the lobster and its preparation for the table.

Boiled Lobster

Put live lobster, head first, into boiling sea water or salted water, allowing enough water to cover lobster completely. Bring water to boil again and cook lobster 15 to 18 minutes, depending upon size. Split lengthwise, remove inedible portions. Serve with melted butter.

Eastern Shore

Before leaving seafood we should stop in at the Eastern Shore of Maryland to remind ourselves how the famous Eastern Shore cooks (using crabs from Crisfield) prepare their

Crab Cakes Maryland

1 lb. crab meat, flaked
1 egg, beaten
1 tsp. salt
1/4 tsp. pepper
1 tsp. dry mustard
2 tsp. Worcestershire sauce
1 tbs. chopped parsley
1 tsp. lemon juice
1 tbs. melted butter
1/2 cup fine bread crumbs

Combine all ingredients (except bread crumbs). Shape into cakes and coat with dry bread crumbs. Pre-heat fry pan 375°. Fry in deep fat until golden brown.

Southern Charms

As we travel South, two famous recipes come to mind which are claimed as specialties by more than one southern state: Southern Fried Chicken and Pecan Pie.

Southern Fried Chicken

Select frying chickens about 3 lbs. in size. Cut up for frying, disjoint, wash, and pat dry. Sprinkle chicken with salt and pepper, and roll in flour. Melt shortening and butter (2/3 shortening and 1/3 butter) to provide 1/2-inch-deep fat in heavy skillet. Add chicken and brown quickly on all sides. Then lower heat, cover pan, and fry until golden brown (about 20 minutes), turning occasionally.

Pecan Pie

1/3 cup butter
1/3 cup brown sugar
1 tbs. flour
1 cup dark corn syrup
2 tbs. melted butter
1 cup pecan halves
4 eggs
Unbaked 9-inch pie shell

Mix brown sugar and flour, then cream with butter. Add corn syrup, butter and pecans. Beat eggs lightly, and fold into mixture. Fill the pie shell and bake in moderate oven (350°) for about 45 minutes, or until filling is set. (Cool the pie before cutting. It will cut better if allowed to stand for 8 to 10 hours.)

We would be very remiss if we did not give some notice to the culinary achievements of New Orleans, especially the sea food recipes. Many fine and famous dishes have been brought to perfection on the Delta; among them

Shrimp Gumbo

1/4 cup butter
2 tbs. flour
1 large onion, chopped
1 one-pound can tomatoes
1 green pepper, chopped
1/4 tsp. Tabasco sauce
1/8 tsp. thyme
1 bay leaf
3 cups liquid (taken from sea food, or water)
1 package frozen okra
3 cups shelled and deveined medium-sized shrimp

Melt butter in heavy skillet. Add the flour and brown lightly Add all the other ingredients except okra and shrimp. Simmer for 30 minutes. Then add okra and shrimp, simmering an additional 10 to 12 minutes. Serve with rice.

Mid-West

The great mid-West is world-famous for its beef. Chicago, as the meat packing center of the nation, has affected the eating habits of all Americans. "Kansas City Beef" is known to every lover of good food.

No elaborate preparation or fancy recipe can improve a steak, broiled under a hot flame, a few minutes on each side. A real Kansas specialty, from the days when Kansas cowboys drove the cattle over the Texas Trail, is hamburger made from Kansas beef and served with a hot barbecue sauce. Hamburgers, like steak, require no recipe. Here is

Hot Barbecue Sauce

1/2 cup onion, chopped fine
1 cup chopped celery
1 tbs. melted butter
1-1/2 cups chili sauce
1-1/2 cups water
3 tbs. lemon juice
1 tbs. brown sugar
2 tbs. Worcestershire sauce
1 tbs. prepared mustard
1 tsp. salt

Combine liquid ingredients, then add seasonings, sugar, onion and celery. Cook over low flame until tender.

West Coast

The West Coast is responsible for two important concepts in the American approach to food: the "salad" as a main course, and the preparation of foods on the outdoor grill. A favorite in many parts of the country

Lamb Shish Kebabs

Thread lamb cubes on skewers, alternating with bay leaves. Season with salt and pepper. Broil all sides until deep brown in color. Marinating is not necessary but brushing the meat with a sauce does add flavor. (Simple sauces can be prepared by combining equal parts of oil and vinegar; or by adding chopped parsley, dry mustard, garlic salt and pepper to melted butter.) Fruits and vegetables cook more quickly than the meat and are best prepared on separate skewers. The possibilities are endless. A few favorites that combine well with lamb are: mushrooms, tomatoes, onions, cooked potatoes, cauliflower, green peppers, eggplant, pineapple, dried fruits which have been cooked, such as apples, pears, peaches.

The Great Outdoors

In nearly all parts of the United States, the hunting season changes the menu. A simple and delicious recipe is this one for

Broiled Venison Chops

Brush chops with olive oil. Season with salt and pepper. Sear under the broiler for 15 seconds on each side. Brush chops again with olive oil and broil 2 to 3 minutes on each side.

The Northwest

Our State of Oregon plants its seedling trees in the midst of a vast fertile area cooled by ocean breezes and ideal for the growing of fruit. Plums and prunes are among the important products of this coastal state, and creative women would inevitably conjure up recipes for their use, such as:

Deep Dish Plum Pie

4 cups plums, diced
1 cup sugar
1/4 cup flour
1/4 tsp. salt
1 tbs. butter
Pastry for 9-inch pie

Place plums in pie tin. Combine sugar, flour, and salt, then sprinkle mixture over plums. Dot with butter. Roll pastry on floured surface to 1/8-inch thickness. Moisten rim of pie tin and place pastry over plum mixture. Seal edges and prick top. Bake in hot oven (400°F.) approx. 35 minutes.

With 50 states in the Union and only three pages in the Almanac, many regional specialties have had to be omitted. But omitted only on paper. Fortunately for all of us, each one of these favorites continues to be served every day throughout the land, a constant source of delight to visitors from other countries who are as interested and curious about our traditional American foods as they are about other aspects of American life.

TABLE OF MEASURES

Apothecaries

1 scruple=20 grains
1 dram=3 scruples
1 ounce=8 drams
1 pound=12 ounces

Avoirdupois

1 pound=16 ounces
1 hundredweight=100 pounds
1 ton=20 hundredweight=2000 pounds
1 long ton=2240 pounds

Cubic Measure

1 cubic foot=1728 cubic inches
1 cubic yard=27 cu. feet
1 register ton (shipping measure)=100 cubic feet
1 U. S. shipping ton=40 cu. ft.
1 cord=128 cubic feet
1 U. S. liquid gallon=4 quarts=231 cubic inches
1 imperial gal.=1.20 U. S. gals.=0.16 cubic feet
1 board foot=144 cubic inches

Dry Measure

2 pints .....=1 quart (qt.)
4 quarts .....=1 gallon (gal.)
2 gallons or 8 quarts .....=1 peck
4 pecks .....=1 struck bushel

Linear Measure

1 foot=12 inches
1 yard=3 feet
1 rod=5½ yards=16½ feet
1 mile=320 rods=1760 yards=5280 feet
1 U. S. nautical mile=6076.1033 feet
1 knot=1 nautical mile per hour
1 furlong=⅛ mile=660 feet=220 yards
1 league=3 miles=24 furlongs
1 fathom=2 yards=6 feet
1 chain=100 links=22 yards
1 link=7.92 inches
1 hand=4 inches
1 span=9 inches

Square Measure

1 square foot=144 square inches
1 sq. yard=9 sq. feet
1 sq. rod=30¼ sq. yards=272¼ sq. feet
1 acre=160 sq. rods=43560 sq. ft.
1 sq. mile=640 acres=102400 sq. rods
1 sq. rod=625 square links
1 sq. chain=16 square rods
1 acre=10 square chains

Troy

(Used in weighing gold, silver, jewels)

1 pennyweight=24 grains
1 ounce=20 pennyweight
1 pound=12 ounces

Household Measures

120 drops water=1 teaspoon
60 drops thick fluid=1 teaspoon
2 teaspoons=1 dessertspoon
3 teaspoons=1 tablespoon
16 tablespoons=1 cup
1 cup=½ pt.
1 cup water=½ lb.
3 tablespoons flour=1 oz.
2 tablespoons butter=1 oz.
3 teaspoons soda=½ oz.
4 teaspoons baking powder=½ oz.
2 cups granulated sugar=1 lb.
3¾ cups confectioners' sugar=1 lb.
2½ cups wheat flour=1 lb.
3½ cups whole wheat flour=1 lb.
2½ cups buckwheat flour=1 lb.
5⅓ cups coffee=1 lb.
6½ cups tea=1 lb.
2 cups lard=1 lb.
2 cups butter=1 lb.
2 cups corn meal=1 lb.
2 cups powdered sugar=1 lb.
2¾ cups brown sugar=1 lb.
2⅜ cups raisins=1 lb.
2⅜ cups currants=1 lb.
9 eggs=1 lb.

Liquid Measure

4 gills=1 pint (O.)
2 pints=1 quart (qt.)
4 quarts=1 gallon (gal.)
63 gallons=1 hogshead (hhd.)
2 hogsheads=1 pipe or butt
2 pipes=1 tun

Metric

1 inch=2.54 centimeters
1 meter=39.37 inches
1 yard=0.914 meters
1 mile=1609.344 meters=1.61 kilometers
1 sq. inch=6.45 sq. cm.
1 sq. yard=0.84 sq. m.
1 sq. mile=2.59 sq. km.
1 acre=0.40 hektars
1 cu. yard=0.76 cubic meters
1 cu. meter=1.31 cubic yards
1 liter=1.06 U. S. liquid quarts
1 hektoliter=100 liters=26.42 U. S. liquid gallons
1 U. S. liquid quart=0.94 liters
1 U. S. liquid gallon=3.76 liters
1 metric ton=1000 kilograms
1 kilogram=2.20 pounds
1 pound avoirdupois=0.45 kilograms

Anecdotes and Pleasantries

JOE MILLER'S JESTS

Joe Miller's Jests, published in London (1739), the most popular "joke book" of all time, contains in its original edition only three jokes (out of the 246 in the volume) by Joe Miller. The remainder were put together by a hack writer, John Mottley, also known as Elijah Jenkins. Joe Miller was a kind of Will Rogers of his day and the joke book was as much a name-dropping gossip column as it was the writing down of jokes, old long before they appeared in print. Today, most of Mottley's collection would be considered bawdy and not funny . . . despite the fact that the name "Joe Miller" still suggests otherwise.

VERMONT RETICENCE

The eminent humorist, Samuel Clemens, who spoke and wrote under the name Mark Twain, at one time appeared before a gathering of Vermont natives in the town of Brattleboro, Vermont. During his allotted time on the platform he told story after story which, before other audiences, had brought gales of laughter. These Vermonters, however, never cracked a smile. Afterwards, Clemens decided he would mingle with the crowd to try to learn why the reaction had been so unfavorable. Standing nearby a carriage into which a man from the audience was lifting his wife, he heard him say:

"Mabel, you know that speaker was real good. It was all I could do to keep from laughing."

"BLITZ-STERS"

During World War II, many American families volunteered to care for and educate young children of English parents who were being subjected to the blitz of London and other parts of England by the Nazis. One English family who sent over six of their youngsters to some childless foster parents in a small Massachusetts town were surprised to receive, within a few months after the arrival of these children in America, the following cablegram: "Take back your children and send us the blitz."

RECEIPT TO KEEP WARM

A receipt to keep one's self warm a whole winter with a single billet of wood: Take a Billet of Wood of a competent size, fling it out of the Garret Window into the Yard and then run down stairs as hard as ever you can drive, and when you have got it, run up again with the same measure of Speed: and thus keep throwing down and fetching up, till the Exercise shall have sufficiently heated you. This renew as often as the Occasion shall require.

Nathaniel Low, 1777

COSTLY KISS

A Mr. Ward, who visited New England in 1698, said of Boston: "The buildings, like their women, are neat and handsome, and their streets, like the hearts of their men, are paved with pebbles. They have four churches, built with clapboards and shingles and supplied with four ministers,—one a scholar, one a gentleman, one a dunce, and one a clown. The captain of a ship met his wife in the street after a long voyage, and kissed her, for which he was fined ten shillings."

Boston Police Records, 1631–1865

SENSIBILITY, 1831

A lady from a society to prevent cruelty to animals went to her butcher to remonstrate with him on his cruel practices.

"How," said she, "can you be so barbarous as to put innocent little lambs to death?"

"Why not, madam?" said the butcher. "Surely you would not eat them alive, would you?"

FIRST ADVERTISING CHARGES

Charging for advertisements in publications began at a very early date . . . perhaps before 1700. The *Observator*, an English publication, charged a shilling for eight lines in 1704, the *Country Gentleman's Courant* (1706) two pence a line.

READ THIS ALOUD QUICKLY

As I was going down the street I saw two bootblacks. One was a black bootblack and the other a white bootblack, and both had black boots, as well as blacking and blacking brushes. The black bootblack asked the white bootblack to black his, the black bootblack's, black boots with blacking.

The white bootblack consented to black the black boots of the black bootblack with blacking, but when he, the white bootblack, had blacked one black boot of the black bootblack with blacking, he, the white bootblack, refused to black his, the black bootblack's, other black boot with blacking unless he, the black bootblack, paid him, the white bootblack, the same as what he, the white bootblack, got for blacking other people's black boots; whereupon the black bootblack grew still blaeker in the face, calling the white bootblack a blackguard, at the same time hitting the white bootblack with the black boot that he, the white bootblack, had already blacked with blacking.

Author Unknown

RANGE OF THE HUMAN VOICE

The range of the human voice is quite astounding, there being about nine perfect tones, but 17,592,186,044,515 different sounds: thus fourteen direct muscles, alone or together, produce 16,383; thirty indirect muscles, ditto, 72,741,823, and all in cooperation produce the number we have named; and these independently of different degrees of intensity.

Editor's Repository, 1865

KATHERINE OF CLERMONT

America's first successful steamboat, usually known as Robert Fulton's "Clermont," made her first trip (Albany to just beyond Kingston, N.Y.) on August 10, 1807. Although the steamer was christened the "Katherine of Clermont" in honor of Robert's wife, perhaps posterity has overlooked the full name in view of this description of the vessel on the day of her first trip: "a rude built craft, about 125 feet long, nearly 20 feet wide, with side paddle wheels, and a sheet iron boiler, she could make about six miles an hour." Surely Katherine Livingston Fulton was better than that?

HE WORRIED ABOUT IT

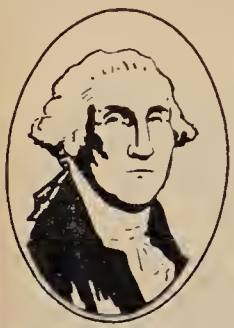
The sun's heat will give out in
ten million years more—
And he worried about it.
It will sure give out then if it
doesn't before—
And he worried about it.

It will surely give out, so the
scientists said
In all scientifical books he had
read.
And the whole boundless universe
then will be dead.
And he worried about it.

His wife took in washing—half-a-
dollar a day.
He didn't worry about it.
His daughter sewed shirts the
rude grocer to pay.
He didn't worry about it.

While his wife beat her tuneless
rub-a-dub-dub
On the washboard drum of her
old wooden tub
He sat by the stove, and he just
let her rub.
He didn't worry about it.

Sam Walter Foss



WASHINGTON

THE PRESIDENTS AND PRESIDENTS TO BE.

JOHNSON

Washington, Adams, Jefferson, Madison, Monroe
From '89 to '25 as Presidents were seen
Adams (J. Q.), Jackson, Van Buren served until '41 or so
Harrison, Tyler, Polk, *Taylor,* and Fillmore made thirteen,
Then came Pierce, Buchanan, *Lincoln* and Johnson
Grant, Hays, *Garfield,* Arthur, adding up to twenty-one,
Cleveland, Harrison (B.), (Cleveland again), then *McKinley,*
T. R. (twice), Taft, Wilson, *Harding,* total twenty-eight really.
Next were Coolidge, Hoover, *F. D. R.* (thrice), and Truman, Harry
"Ike" (in '53), and *John F. Kennedy.* L. B. J. is fifth-and-thirty.
Of V. P.'s there were thirty-seven, (now it's Humphrey),
Of these *Gerry, King, Wilson, Hendricks, Hobart,* and *Sherman*
Died in office (Calhoun resigned), that makes seven you see
While eight, as Presidents, were lost to this country.

All those in *italics* in office died or were assassinated.
Several served when the V. P. should have been nominated.
Now we have a new Constitutional Amendment making the rounds,
Thirty-eight states (three quarters), the way it sounds,
Will have ratified it in '67 and clarified "succession."
To wit, in case of removal, death, or resignation
The Vice President becomes President is the regulation.
If the V. P.'s gone, the President appoints with Congressional confirmation.
If the President notifies the Senate's Prexy pro tem
And the Speaker of the House, that it's up to them,
That he's no longer able, the V. P. automatically takes over.
That same V. P. and a majority of executive officers, however,
Or, of another Congressional body, may go over the President's head,
Submit to the Senate's Prexy, and House Speaker he's as good as dead.
In which case this V. P. succeeds even if the President (or his wife) sees red.
The President, in writing, then can argue he's well and fine
Gets back his powers unless within four days
The V. P. and his buddies proclaim the man's out of his mind.
Thereupon the full Congress must meet in 48 hours, the law says,
Decide within twenty-one days and by two-thirds vote, determine
That Mr. President is not OK, the V. P. is to succeed him.
Otherwise, the President, presumed well and sane, takes over again.

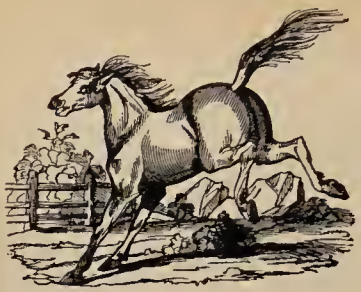
STANDARD AND DAYLIGHT SAVING TIME, 1967

The system of STANDARD TIME throughout the world uses Greenwich, England, as a base point. From there to the East there are 12 time zones, one for each of the 12 meridians 15 degrees apart, each succeeding zone East being one more hour behind Greenwich Time—and to the West, 12 more time zones of similar 15-degree size, each succeeding zone West being one more hour ahead of Greenwich Time. The above map shows the four major Time Zones of continental U.S.A. The Atlantic Zone (adjoining the eastern border of Eastern), which includes part of Maine and Newfoundland, Puerto Rico and the Virgin Islands is one hour faster than Eastern and four hours faster than Greenwich. The Canal Zone observes Eastern Zone Time. Yukon Standard Time is now in effect in the degree segment adjoining Pacific Zone to its West and this includes part of Alaska. Another part of Alaska and Hawaii are now on Alaska-Hawaii Time in the zone of that name which is one zone to the West of the Yukon Zone. Finally, if we include the Atlantic Zone in the East Coast as the first, the last is the eighth or Bering Zone covering the Aleutians, one to the west of Alaska-Hawaii. As the above map indicates, more than one state observes more than one Time Zone within its borders.

Until President Johnson signed (April 1966) the Uniform Time Act of 1966, Daylight Saving Time regulations in some states caused confusion. For example, in Minnesota, there was Central, D.S.T., and Extended D.S.T. all going at once. In Tennessee, Nebraska, and Utah, states split by the Time Zones anyway, D.S.T. got in to divide them further.

Under the new Act, except for states which vote to exempt themselves, Daylight Saving Time will begin at 2 A.M. **everywhere** (in all eight U.S. Time Zones) on the last Sunday of April and end at 2 A.M. on the last Sunday of October. ("A.M.," incidentally, stands for "Antemeridian.") This new Act takes effect April 1, 1967 except that any state which observed D.S.T. in 1966 was obliged to conform to the uniform beginning and ending dates. States which have more than one Time Zone must observe D.S.T. in both Zones. States which rule themselves exempt under this new Act from D.S.T. must exempt **both** Time Zones within their territories, and not just one. Full and detailed information on this subject is obtainable from the Interstate Commerce Commission, Washington, D.C. 20423.

Any world map will reveal the territories which the 24 Time Zones of 15 degrees longitude each (12 to the West of Greenwich, 12 to the East, respectively) include. When the rebroadcasts from the television satellite become more frequent, no doubt all sets will have these Time Zones on them for easy reference.



THE HORSE IS HERE TO STAY

by Raleigh S. Burroughs

Though the automotive industry has made spectacular progress since 1910, what your great-grandfather said then still is true: the automobile never will take the place of the horse.

Oh, gas-fueled vehicles are all right for delivering milk, transporting people and alleviating the problem of alcoholism by allowing the drunks to exterminate one another, but a three-year-old Pontiac would look pretty silly running in the Kentuck Derby.

And whoever heard of playing "Pin the Tail on the Volvo?" It's got to be a donkey.

The engineering genius of Ford, General Motors and Chrysler never will be able to create a five-gaited convertible that will win ribbons at Madison Square Garden. And if you turned out a pair of Ramblers in a field, and came back a year later, there'd still be only two of them.

While only a few horses are earning their livelihood pulling brewery trucks and vegetable wagons, the animal still is in great demand, and producers of them get bigger prices per unit than for any other type of livestock.

Fashionably-bred one-year-old racehorses go for $50,000 at public auctions without causing comment. Stallion fees run to $15,000—$5,000 is commonplace—with 30 or more engagements per year.

It's better than raising Rock Cornish hens.

Several states have instituted special bonus funds to encourage the breeding of horses within their borders. Now, the breeder receives money not only when he sells the horse, but when it wins. It's like the actors with movies on the late show.

Everybody with an acre of grass is getting into the business. Animal husbandmen whose previous experience never went beyond Belgian hares, now are setting up Thoroughbred factories.

Fortunately for the poor, money does not make success certain (though nothing has been found that comes closer to providing a guarantee).

As it is among humans, the best bloodlines, at times, produce some outstanding bums, and brilliant performers often are spawned by undistinguished parents.

One thing you've got to say for horse-breeders, they're always happy to aid a newcomer. If a total stranger comes along with only a few hundred thousand in his pocket, he'll be made to feel like "home folks." Horse traders will befriend him, advise him and, if possible, sell him a horse or two.

If a man tells you he's in the horse business, but has nothing to sell, he's a fraud, and you should notify your nearest FBI office.

While roses are strewn in the paths of well-heeled potential buyers, the prospect with a limited bundle is not ignored. Naturally, he will not be shown the deference that is accorded the very wealthy, as there isn't as much to show deference to. But no matter how modest a man's budget may be, if he wishes to buy a horse, there will be some one to take him—or, rather, take care of him.

The best way to get into Thoroughbred farming is to buy three or four perfectly-bred mares, already in foal to stallions of fabulous worth. Such mares can be picked up in almost any large breeding center and rarely are worth more than their weight in uranium.

If you happen to be the kind of person who doesn't have half a million dollars, you'll have to be satisfied to start slowly and work your way up.

A sage breeder of years ago bequeathed his formula for success to the generations that followed his.

"Breed the best to the best," he advised, and added, "and hope for the best." From this you gather there are no certainties, and that miracles of genetics provide disappointments and pleasant surprises.

If you cannot afford what savants consider the best, you have to take the best you can afford, and acquire the services of the best stallions that come within your budget.

Don't scrape the bottom of the piggy bank at the beginning. If the mare you come up with should produce a foal that goes on to win a Santa Anita Handicap or a Belmont Stakes, she will become a valuable piece of property. Her subsequent foals will be greeted eagerly at the sales, and fat prices will be paid for them. Almost overnight, you will attain opulence.

The chances against your mare's accomplishing such a feat are about 100,000 to 1, but if you can't dream, this isn't your spot of tea.

The experiences of "Wendell Noviss" illustrate, step by step, procedures that may be followed by anyone seeking the benefits accruing to small-scale Thoroughbred breeders.

After attending a number of Saratoga Sales, and seeing horses going for anywhere from $7,000 to $80,000, Mr. Noviss decided to put himself in a position to scoop up some of the loot.

He broached the subject to a close friend (and horse breeder), "Merv Subtle," who put his stamp of approval on the idea at once.

"You're very wise," said Mr. Subtle. "Choose carefully. If I may be of service, don't hesitate to say so. First of all, look for the best breeding you can get. There's no horse in our time that compares with Hyperion. Get Hyperion blood if you can. Remember what Lord Derby said, during World War II: 'Though England fall, Hyperion shall never leave these shores.' That's the kind of bloodlines you want to get."

Mr. Subtle paused for breath, and Mr. Noviss said, "Gee that's exciting. But how can a man in modest circumstances pick up anything by Hyperion?"

"It isn't easy," explained Mr. Subtle. "But you're a friend, and I promised to help. I wasn't going to sell this mare, but she's a granddaughter of Hyperion, and she'd be a great one to start somebody on the road to financial independence.

"I'll talk to my partner about it. He likes you, too. Another thing, this mare is in foal to Triple Bourbon, and you know what a fine stud he is."

Mr. Noviss said, "Well, gosh —"

"Doggone it, you talked me into it," Mr. Subtle said. "But, mind you, I can't say for sure until I talk to my partner Lennie. Better still, you talk to him. He likes you, like I said. He'll be at the barn tomorrow."

Mr. Noviss was thrilled, but there still was a question that had to be asked. "How much?" he inquired.

"Oh yes, of course — almost anything you want to give. I just want to see you in this business. Make it a thousand. Don't forget, she's in foal to Triple Bourbon, and you know what a fine stud he is. Don't thank me now. It isn't okay, though, until you see Lennie. He'll be at the barn in the morning."

Not sure he was doing the right thing, Mr. Noviss went to the barn in the morning. Lennie was there and he was very displeased.

"Merv Subtle had a big nerve selling that horse to you for a thousand without talking to me," Lennie began. "I got a fellow up in the county who's been begging me to take fifteen hundred, and I turned him down."

"Well," said Mr. Noviss, "I wouldn't want you to get in wrong with the fellow up in the county."

"Forget him," Lennie responded hastily. "I like you and my partner gave you his word. We're stuck."

That's how easy it is to get into the game.

As this is a true story, it must be reported that the road to financial independence was not a four-lane boulevard.

As predicted, the mare foaled the following spring. As was not predicted, the outcome of her mating with the great Triple Bourbon resulted in twins (an unhappy circumstance) which had barely hit the ground when rigor mortis set in.

The next year, though, there was a fine chestnut filly. (Triple Bourbon had nothing to do with its genesis). She went for $2,400 at the yearling sales, a far piece from $80,000 and numbers like that, but it was encouraging.

Mr. Noviss feels that the operation is "off the ground" and he will be ready when the road to financial independence is open to traffic. What Mr. Noviss did, you can do.

As a matter of fact, if a deserving person should come along, Mr. Noviss may be prevailed upon to sell this very mare. He'd have to discuss the matter with his partner, though. (Better still, you do it.)

COMMENTARIES ON COMMON SAYINGS

by Noah Webster

1833

He does not work it right.

I knew a young man who left the army with an invincible attachment to gambling. He followed it closely till he had lost most of his wages; he then purchased a shop of goods, mostly on credit: he had his nightly frolicks: *he kept it up;* he was a blood of the first rate; his goods were soon gone and not paid for; his creditors called and he began to shrug his shoulders; in fact, *he did not work it right.* But his friends helped him out of six scrapes, yes out of seven. At length necessity broke his spirit; it tamed him; he married; became a man of business; recovered his lost credit; and now *he works it right.*

I often say to myself, as I ride about the country, what a pity it is our farmers *do not work it right.* When I see a man turn his cattle into the street to run at large and waste their dung, during a winter's day, I say this man does not work it right. Ten loads of good manure at least, are lost in a season by this slovenly practice; and all for what? For nothing indeed, but to ruin a farm.

So when I see cattle, late in the fall or early in the spring, rambling in a meadow or mowing field, poaching the soil and breaking the grass roots, I say to myself, this man *does not work it right.*

So when I see a barn-yard with a drain leading into the highway, I say the owner does not work it right; for how easy it is to make a yard hollow, or lowest in the middle, to receive all the wash of the sides, which will be thus kept dry for the cattle. The wash of the yard, mixed with any kind of earth, or straw, is the best manure in the world; yet how much do our farmers lose! In fact, they do not work it right.

When I pass along the road and see a house with the clap-boards hanging an end by one nail, and old hats and cloths stuffed into the broken windows, and the fences tumbling down or destroyed, I conclude the owner loves rum and brandy; in truth he does not work it right.

When I see a man frequently attending courts, I suspect he *does not work it right.*

When I see a countryman often go to the retailers with a bottle, or the laboring man carrying home a bottle of rum, after his work is done on Saturday-night, I am certain the man *does not work it right.*

When a farmer divides a farm of 100 acres of land among five or six sons, and builds a small house for each and sets them to work for a living on a little patch of land, I question whether *he works it right.* And when these sons are afterwards unable to live on these mutilated farms, and are compelled by a host of children, to go to work by the day to get bread, I believe they are all convinced that they *have not worked it right.*

When a man tells me his wife will not consent to go from home into new settlements, where he may have land enough and live like a nabob, and therefore he is obliged to sit down on a corner of his father's farm, I laugh at him, and some time or other he will own, *he has not worked it right.*

A man in trade who is not punctual in his payments, certainly *does*

not work it right; nor does the man, who trusts his goods to *any body* aud *every body.*

Whether in Congress or a kitchen, the person who *talks much* is *little regarded.* Some members of Congress then certainly *do not work it right.* A hint to the *wise* is sufficient; but twenty hints have not been sufficient to silence the clamorous tongues of some congressional spouters.

Family government gives complexion to the manners of a town; but when we see, every where, children profane, indelicate, rude, saucy, we may depend on it their *parents do not work it right.*

I once knew a young man of excellent hopes, who was deeply in love with a lady: The first time he had an opportunity to whisper in her ear, and before he had made any impression on her heart in his favor, he sighed out his sorrowful tale to her, iu full explanation: the lady was frightened; she soon rid herself of the distressed lover; she said *he did not work it right.*

How should I work it?

According to what is to be done. If you would do a *great deal* and do it *well,* write in large letters and paste up over the fire place of your keeping-room, the following maxim of the great *De Wit,* Pensionary of Holland, DO ONE THING ONLY AT A TIME.

Are you a farmer? keep each kind of work, as much as possible by itself. Don't ruu to half a dozen fields iu a day and work a little in each; unless necessity obliges you to do it. That work which may be done at any time, should be done in winter or when you have leisure. Get wood in winter and cover it; if I see a man, *in midst of harvest,* forced to go after a load of wood, I am sure he *has not worked it right.* Keep a complete set of instruuents or tools. When I see a man running to one ueighbor after a fan, and to another after a shovel, I set him down, not only as poor, but as *doomed* to be poor. His neighbor's fan or his shovel *will do for the present,* but the occasions for them occur often, and how much time and labor are lost in going after them! If you would work to advantage keep a complete set of utensils for your business; keep them *housed,* that they may last long; and in their *place,* that yon may easily find them.

Do not run in debt to buy land. Land will not generally support a family, and pay taxes and *interest* on its value. If you have but a small piece of land, cultivate it well, make it produce as much as possible, and if you can get more than will maintain you from this little farm, lay out the surplus in buying more. If you cannot get more thau a subsistence, it is time to think of lessening expenses, or selling out and buying new land. Depend on it, farmers who pay interest, *do not work it right.*

Never do work to the halves. If you build a house or a barn, lay a plan that is within your power and then *finish* what you begin. For want of the *last* half, the *first* is oftcn totally lost.

He would have his own way.

And no way is so good as *mine.* The questiou is not whether this or that is the *better* way, but whether it is *my* way or *your* way. Orthodoxy is *my* doxy and heterodoxy is *your* doxy.

If a man is successful in an undertaking, every neighbor he has cries out, ah, I thought so; that is *my* way. If unsuccessful, every one says, ah, I told him so, but he *would* have his *own* way.

Said a very complyiug husband to his wife, "shall I put the winter apples into the east or west cellar." "Just which you please," said the wife; "you know which is best." In the winter the apples froze and were spoiled; the good lady found it out, and complained to her husband, "My dear, the apples are all froze and spoiled; you put them into the wrong cellar; but you *would* have your *own* way."

STONEHENGE WAS (AND IS) AN ALMANAC(K)

The Theological Triads of the Druids is a collection made about 1560 A.D. from various manuscripts of considerable antiquity by Llewelyn Sion, a Welsh bard. From *The Triads* — and other manuscripts — Welsh scholars have believed that the traditonary annals of the Cymry (or Welsh) extend back even to the creation of the Universe.

"God, in vocalizing His name, said /I\, and, with the word, all worlds and animations sprang co-instantaneously to being. . . ."

The erection of Stonehenge is recorded in *The Triads* as one of the three mighty labors of the Isle of Britain — the other two being "erecting the stone of Ketti, and heaping the pile of Cyvrangon."

The Llanover MS. points out that the Welsh, from the earliest times, had a "knowledge of the course of the stars, their names and kinds. . . ." They paid attention at an early period to astronomy. One of the earliest known words which was, and still is, used to denote time is AMSER — the literal meaning of which is "revolution of the stars." The name Luna commonly given to the moon is but a modification of the old Welsh word *llun*.

The "Voice Conventional" in the Iolo MSS. states that the formation of the "sacred circle" was regulated according to the principle of solar orientation. Tradition, however, is silent as to whether or not the stones of which it was formed were meant to represent the Signs of the Zodiac. The number twelve seen in the circle at Caernarvonshire would seem to point to the zodiac. At Stonehenge, formations of 19, 30, and 60 stones gave Maurice (in his *Indian Antiquities*) reason to state:

"The number of stones and uprights (in the outward circle), making together exactly *sixty*, plainly alludes to that peculiar and prominent feature of Asiatic astronomy, the sexagenary cycle — while the number of stones forming the minor circle of the cove, being exactly *nineteen*, displays to us the famous *Metonic*, or rather *Indian*, cycle: and that of *thirty*, repeatedly occurring, the celebrated age or generation of the Druids."

Triad 39 also makes it quite clear that these early Welsh settlers were acquainted with not only astronomy but also with astrology, the so-called science of foretelling future events from the aspects and positions of the heavenly bodies.

From the foregoing, it seems clear that Stonehenge, at least in part, was built before 1560 A.D. . . . and that the Welsh, who built it, considered it, among other things, a useful almanac. And that's about the way history had viewed these ruins until 1953.

In 1953, one Gerald Hawkins grew curious. This English-born astronomer is now Director of the Boston University Observatory and a staff member of the Harvard College Observatory and the Smithsonian Astrophysical Observatory. He knew that the single most famous scientific discovery ever made at Stonehenge was an astronomic finding: the monument is so oriented that its major axis points northeasterly, to the horizon position of the rising sun on midsummer morning. He wondered if the old stones, so carefully placed to direct the viewer's gaze through double archways down narrow vistas, could hold other astronomic secrets.

Other astronomers had theorized about possible astronomic significance of Stonehenge alignments, but they had been prevented from testing any theories by the appalling amount of calculation necessary. There are scores of alignments at the site, and hundreds of rise-set positions of stars and other heavenly bodies to which they might point; the task of calculation and comparison involved was almost beyond human endurance.

Dr. Hawkins was human. But he had a non-human assistant: Harvard's electronic computer. He gave that lightning-fast, untiring, most modern calculating machine (not quite rightly called the "giant brain" — computers can't "think," yet) the ancient problem. First he fed into it the geographic locations of the most important Stonehenge

positions — the archway midpoints and other key spots — and instructed the machine to determine where those positions, aligned in pairs, intersected the horizon. Then he checked those horizon points against the rise-set horizon points of the heavenly bodies. With the stars there was no particular correlation. Nor with the planets. But with the sun and moon — BANG! The machine showed that all of the most important Stonehenge positions were aligned in pairs, without exception, to 15 of the 18 unique sun/moon positions! The accompanying diagram shows eight of these alignments.

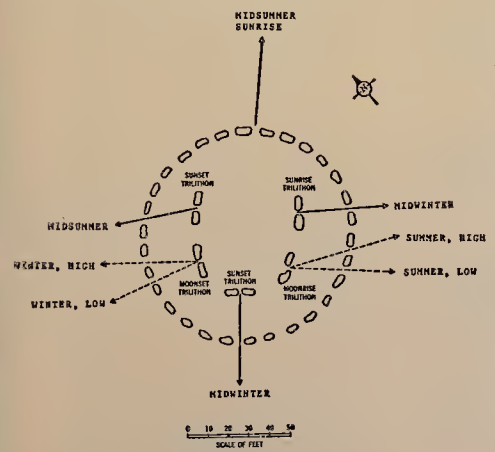
Stonehenge Decoded by Gerald S. Hawkins in collaboration with John B. White, published by Doubleday ($5.95 — © 1965 by Gerald S. Hawkins and John B. White), describes in detail the astronomic discoveries Hawkins has made with regard to Stonehenge, its builders, users, and prehistoric men. It tells, among other things, how Stonehenge was built in several great waves of activity between 1900 and 1600 B.C. The tremendous, awe-inspiring structure, Hawkins believes, is younger than the oldest of Egypt's pyramids, and contemporary with both the Cretan Labyrinth and the Lion Gate of Mycenae. There is evidence of Mediterranean influence in its construction, but because it was so far away from the southern centers of culture, it was all but forgotten by classic times.

Final solution of one of the oldest, most puzzling, and onerous problems of Stonehenge — the mystery of the obviously meticulous relative orientation of the stones — took the machine some 56 seconds. That 56-second finding has profoundly affected our concept of prehistoric man. It has given new impetus and direction to our studies of the deep past.

That which is perhaps most astounding of all is how these intelligent people of 3500 B.C., during the late Stone and early Bronze Ages, in the far north of the then-known world, moved the tremendous stones of Stonehenge (the largest weighs 50 tons) to the site — and how, once there, they so skillfully, artfully, and accurately constructed it.

A prehistoric farmer, or king, or priest, who knew how to "use" in his day these silent stones could have predicted, and followed, the progress of the year by seasons and by months, predicted eclipses, etc., almost as closely as can the calendarized, computerized science of today which makes up this *Old Farmer's Almanac.*

Furthermore, as a really complete observatory-almanac should, Stonehenge was able to follow the sun's sister. The only double-archways which did not direct the viewer's gaze to those seasonal positions of the sun were aligned to the extreme winter-summer rise-set positions of the moon.



This diagram of Stonehenge as it was in 1600 B.C. (many stones have fallen and some have disappeared since) shows how the vistas through the double archways directed the viewer's gaze toward unique rise-set positions of the sun and moon, making the whole structure an accurate almanac. To see the midsummer sunrise, the viewer stood in the center of the monument and looked out over the distant "heel stone." (Thousands of modern viewers come to Salisbury Plain every June to see the same sight). Other similar astronomic alignments were created by pairs of specially-placed stones and mounds not shown on this simplified chart.

OLD-FASHIONED PUZZLES

(For answers, see page 120)

I

Conrad the Counterfeiter stood before the King of Ruritania for sentencing. Conrad's accuser, Alex Schleswig, Director of the Royal Mint, spread eleven genuine gold kronur before the King for comparison, then held out the evidence: one counterfeit krona.

"O, King," informed Schleswig. "This counterfeit was seized in Germany and forwarded with the report that it could not be distinguished from the genuine by size, color, or markings, but only by its slight difference in weight."

"Heavy or light?" asked the King.

"The report does not state," replied Schleswig.

And Conrad, to the same question, honestly replied that he did not know.

The King took and examined the coin.

"A most excellent piece of work," he commented to Conrad. "How unfortunate it is that by your choice of profession the Royal Mint has lost a master craftsman and that you, now, must lose your head."

He then returned the coin to Schleswig, who placed it, along with the other eleven, in a bag. Seeing this, the King's face turned as purple as his robes.

"Dumkopf!" he roared. "You have lost the evidence!"

"A thousand pardons, O King!" pled the flustered Schleswig. "But if the King will allow the Royal Balance to be brought in, I shall retrieve it."

"In how many balancings?" asked Conrad.

"In eleven at most," snapped Schleswig.

"It could be done in four at most," scoffed Conrad.

"Find the counterfeit in four balancings," said the King to Conrad, "and you shall keep your head."

When the balance arrived, Conrad placed three of the twelve coins in the left pan, and three in the right. The left pan went down. Perceiving this, Conrad turned to the King.

"O, King," he said, "I shall require but two more balancings."

"He gambles!" cried Schleswig. "Or else he lied when he denied knowing whether the counterfeit was heavy or light!"

"Enough!" said the King. He turned to Conrad. "If you can do this, you are worthier of the Director's post than its incumbent. Reveal, then, your system in advance, and if it bears reason's scrutiny, the post is yours."

Conrad then revealed his system, and became Director of the Royal Mint. What was his system?

II

A farmer used steel pipes 3½ inches in diameter to move heavy machinery. How far did the machinery move when the pipes made one revolution?

III

I have one room in my house which is too large, it is square, and I want to partition off from one corner of that room a square room, to contain one-fourth part of the large room. Then I want to divide the remaining three-fourths of the large room into four rooms, in such a manner that each of the four rooms will be of the same shape and of the same size. How shall I do it?

IV

If seven pedestrians start at the same time and point to travel around a circular plot of ground 128 feet in circumference, and travel respectively, three, five, six, seven, nine, ten, eleven feet per minute, at what time will they all be together at the point of starting?

V

From six take nine,
From nine take ten,
From forty take fifty,
And six will remain.

CHARADES, REBUSES, CONUNDRUMS, ENIGMAS, etc.

(For answers, see page 120)

I

II

I am composed of 25 letters.
My 12, 4, 1, 18, 20, is a word meaning empty.
My 11, 3, 22, 9, 12, 13, 10 is a kind of monk.
My 2, 24, 17, 5, 19 is a piece of money.
My 6, 16, 8, 22 is a division of time.
My 25, 3, 10, 25, 7 are sometimes bad.
My 17, 21, 5 are thought after dinner.
My 13, 3, 14 is large.
My whole is an old saying.

III

What bird is that whose name represents nothing, twice yourself and fifty?

IV

My first in cities is well known,
And by me many live,
Obtain their freedom in the town
And then a vote can give;
My second we can never see,
Whether on the land or sea;
My whole the sailor ofter braves,
When he plows the briny waves.

V

VI

Why does a man in paving the streets correct the public morals?

VII

Entire, I am a companion; beheaded, a verb: replace my head, curtail me, and I am found in nearly every house; curtail again, I am a nickname; reversed, a verb.

VIII

My 1-2-3 designates abbreviations of three states. The whole these states would be before the Revolution. See?

IX

There is a word of five syllables — take away the first and no syllable will remain.

X

I am found in a jail; I belong to a fire;
And am seen in a gutter abounding in mire;
Put my last letter third, and then 'twill be found; I belong to a King, without changing my sound.

XI

My first is irrational, my second is rational, my third is mechanical, and my whole is scientifical.

XII

What word is that to which if you add a syllable, it will make it shorter?

XIII

XIV

What is that which is lengthened by being cut at both ends.

YOUR FACE IS YOUR FORTUNE

PRINTED FOR THE PURCHASER,

BROOKFIELD, MASS. 1816

The man whose hair is very black and smooth, hanging far over his shoulders and in large quantity, is mild but resolute; cool, until greatly provoked; not much inclined to excess of any kind, but may be persuaded to it; constant in his attachments, faithful and affectionate to his family; not addicted to lewdness, though sensible of and submissive to the empire of love: he will be prosperous in his undertakings, and not liable to many misfortunes.

A woman of the same kind of hair is moderate in her desires of every kind, temperate in her diet, addicted to reflection; steady in her resolution and, though not subject to violence in love, is no enemy to its pleasures, and steady in her attachment; of a constitution neither vigorous nor yet feeble.

If the hair is very black, short and curling, the man will be given to liquor, somewhat quarrelsome, of an unsettled temper, more amorous, and less steady in his undertakings, though ardent at the beginning of an enterprize; he will be very desirous of riches, but in general miss his aim, and be subject to much discontent.

The same may be said of a woman.

A man with dark brown, long, and smooth hair is generally of a robust constitution, obstinate in temper, eager in his pursuits, a lover of the other sex, fond of variety in his ordinary pursuits, exceedingly curious, and of a flexible disposition; in his amusements very fickle; will not continue long attached to the same woman unless she takes extraordinary pains to please him; he will live long, unless guilty of early intemperance.

A woman of the same kind of hair, will be nearly the same as the man, but more steady in her conduct and attachments, especially in love; she will be of a good constitution, have many children, be much respected, enjoy good health, and a reasonable share of happiness.

If the hair is short and bushy, it will make very little alteration in man or woman; but that man will be more forward to strike when angered, and the woman more of a scold.

A man with light brown, long, smooth hair is of a peaceable, even, and rather generous temper; will prevent mischief if in his power, but when provoked will strike furiously, is sorry for his passion, and soon appeased; strongly attached to women, and will protect them from any insult; money he will be desirous of having, more to do good than for the sake of hoarding; if he is guilty of infidelity to his wife, it will be very discreetly; upon the whole, he is in general an amiable character, affable and kind.

A woman of the same kind of hair is tender hearted, but hasty in her temper; neither obstinate nor haughty, her inclinations to love never unreasonable, her constitution will be good; but she will be seldom very fortunate.

If the hair is short, bushy, and apt to curl by nature, the man will be more industrious, and the woman more sedentary.

A man with fair hair will be of a weak constitution, his mind much given to reflection, especially on religious matters; he will be assiduous in his occupation but not given to rambling; very moderate in his amorous wishes, and must take great pains to live to a middling age.

A woman of this colored hair is, on the contrary, of a good constitution never to be diverted from her purposes, very passionate in love affairs; never easy unless when in company, and delights in hearing herself praised, especially for beauty; delights in dancing, romping, and violent exercises, and commonly lives to a great age.

A man with long red hair is cunning, artful, and deceitful; he is

very much addicted to traffic of some kind, restless in his disposition, constantly roving, if he possibly can indulge himself in the desire; oftener desirous of the pleasures of love than capable of indulging himself in them; greedy of getting money, he will often spend it foolishly; in every thing he undertakes is indefatigable, no obstacle will induce him to forsake his enterprize until he has seen the issue of it: he is by nature rather inclined to timidity and dread of pain, but by reflection may correct it and pass for a man of courage.

A woman of the same kind of hair is glib of tongue, having words at will, talkative and vain; her temper is impatient and fiery, and will not easily bear contradiction; she has a constant flow of spirits, and excessively given to the pleasures of love; however delicate her person may seem, her constitution is generally vigorous, but she seldom lives to old age; her promise is seldom to be depended upon, because the next object that engrosses her attention makes her forgetful of every thing that preceded it: she will give nothing without a valuable consideration and, lastly, will resent any disappointment she may meet with.

We will now proceed to give some few instructions concerning the hair in other particulars; first, with respect to baldness.

If the hair falls off at the fore part of the head, the person will be easily led, though otherwise rational, and will often find himself duped when he thinks he is acting right; he will frequently meet with disappointments in money matters, which will either hurt his credit or force him to contract his expenses.

If the hair falls off behind, he will be obstinate, peevish, passionate, and fond of commanding others, though he has no right, and will grow angry if his advice is not followed, however preposterous; he will be fond of hearing and telling old stories and tales of ghosts and other incredible things; but will be a domestic man and provide for his family to the utmost.

If the hair forms an arch round the forehead, without being much indented at the temples, both man and woman will be innocent, credulous, peaceable, fond of good eating but without excess; moderate in all their desires, and though not ardent in their pursuits, will still be persevering; they will be mild, modest and good-natured, moderately prosperous, but not very long-lived.

If the hair is much indented at the temples, the person will be affable, steady, good-natured, a great breeder, prudent, and attentive to business, of a solid constitution, and likely to live long.

If the hair descends low upon the forehead, the person will be selfish and designing, of a surly disposition, unsociable, and given to drinking; he will be addicted to avarice, and will uot spend unless he expects to gain by it; his mind will be always iutent upon the means of carrying on his schemes; he will not live to be of a great age.

If the eyebrow is very hairy, and that hair long and curled, with several of the hairs starting out, the man or womau is of a gloomy disposition, litigious, and quarrelsome but rather cowardly; greedy after the affairs of this world, perpetually brooding over some melancholy subject, and not an agreeable companion; he will be diffident, penurious, and weak in his understanding.

If the eyebrow is thick and even, that is, without any or few starting hairs, the man or woman will be of an agreeable temper, of a sound understanding, and tolerable wit.

If the eyebrow is small, thin of hair, and even, the man or woman will be weak-minded, timorous, superficial, and not to be depended on: he will be desirous of knowledge: but will not have patience and assiduity enough to give it the necessary attention.

If the eyebrow is thick of hair towards the nose, and goes off suddenly, very thin, ending in a point, the man or woman will be surly, captious, jealous, fretful, and easily provoked to rage; whatever he undertakes he will pursue with violence until he meets with some great obstacle, and then he will abandon it entirely.

The eye that is large, full, prominent, and clear, denotes a man or woman to be of an ingenious and candid disposition, void of deceit, and of an even, agreeable, and affable disposition; he will have several children, but more girls than boys, and will be careful in educating and providing for them.

The eye that is small, but advanced in the head, shews the man or woman to be of a quick wit, sound constitution, lively genius, agreeable in conversation, and of good morals; but inclined to jealousy, though never without some foundation.

The man or woman whose eyes are sunken is of a jealous, distrustful, malicious, and envious nature; deceitful and hypocritical in words

Continued on page 106

WEATHER FORECAST–1966–7

Continued from page 19

rain 1", northeast storm; 27–31, clear.

Apr.: Temp. 46.8° (normal 45.7°). Prec. 4" (normal 4.06"). Snow 4" (normal 8.6").

1–5, rain 1"; 6–7, clear; 8–12, rain 1"; 13–16, clear; 17–20, prec. 1", snow 4"; 21–22, clear; 23–26, rain 1"; 27–30, clear.

May: Temp. 56.7° (normal). Prec. 4.6" (normal 3.48").

1–2, rain .6"; 3–4, clear; 5–7, rain .5"; 8, clear; 9–11, rain 1"; 12–15, clear; 16–17, unsettled; 18–20, clear; 21–24, heavy (1.5") rain; 25–27, clear; 28–30, rain 1"; 31, clear.

June: Temp. 67.9° (normal). Prec. 4.3" (normal 3.48").

1–2, clear; 3–5, rain 1"; 6–7, clear; 8–10, rain 1"; 11–12, clear; 13–15, rain .7"; 16–19, clear; 20–22, warm rain 1"; 23–28, clear, hot; 29–30, rain .6".

July: Temp. 71° (normal 70.9°). Prec. 3.8" (normal 3.27").

1–2, clear; 3–4, thunderstorms, 1" rain; 5–7, hot; 8–13, thunderstorms, rain 1"; 14–18, hot; 19–22, rain 1"; 23–26, clear; 27–29, rain .8"; 30–31, clear.

Aug.: Temp. 71° (normal 69.4°). Prec. 4.1" (normal 4.05").

1–2, clear; 3–6, rain 1"; 7–9, clear; 10–12, rain .5"; 13–14, clear; 15–21, rain, southeast storm 1.5"; 22–23, clear; 24–28, rain, southeast storm 1.1"; 29–31, clear.

Sept.: Temp. 64° (normal 62.4°). Prec. 4" (normal 3.95").

1–5, heavy rain, 1.25"; 6–8, clear; 9–11, rain .75"; 12–13, clear; 14, rain .25"; 15–20, tropical (hurricane?) storm, 1" rain; 21–22, clear; 23–24, rain (hurricane?) .25"; 25–27, clear; 28–30, rain .5".

Oct.: Temp. 52° (normal 54.6°). Prec. 4.8" (normal 3.75").

1, clear; 2–3, rain .5"; 4–10, clear; 11–14, rain 1"; 15–17, clear; 18–19, rain 1.5", turns to snow; 20–22, clear; 23–25, rain 1"; 26–27, clear; 28–31, rain .8".

Nov.: Temp. 43° (normal 42°). Prec. 4.8" (normal 4.53"). Snow 6" (normal 2.16").

1, clear; 2–4, rain 1"; 5–7, clear; 8–11, prec. .8", snow 2"; 12–14, clear; 15–17, rain 1"; 18–20, clear; 21–22, rain 1"; 23–25, clear; 26–28, prec. 1", snow 4"; 29–30, clear.

Dec.: Temp. 33° (normal 30°). Prec. 4" (normal 3.6"). Snow 14" (normal 12.7").

1–2, rain 1"; 3–4, clear; 5–6, prec. .25", snow 2"; 7–9, clear; 10–11, prec. .5", snow 2"; 12–14, clear; 15–18, prec. 1", snow 5"; 19–23, clear; 24–28, prec. 1", snow 6"; 29–30, clear; 31, prec. .25", snow 2".

MYSTERIOUS EVENT, 1817

The Rev. Artemus Shattuck, 22 in the Winter of 1817, was chopping down a tree in his family lot 1200 yards from his home. As the tree fell, it caught his foot between stump and butt. Unable to free himself (his axe being out of reach), or make himself heard, he amputated his foot by means of his pocket knife, then crawled in the below zero temperature back to his house. A surgeon, summoned from Batavia, New York, 15 miles distant, managed to save his life.

In the meantime, Shattuck asked his brothers to go to the tree and bring back the amputated member. In the interests, perhaps, of giving a Christian burial to a Shattuck foot, they did as asked. When it was brought into the kitchen, he said, "The foot is suffering wickedly from the cold; put it in warm water." To humor him, they did. The kitchen stove had kettles of water of various temperatures on it, and the one they used was scalding. Artemus was in a room down the hall, out of sight of the kitchen, and he had no way of knowing which kettle was used. Nevertheless he screamed, "The water is too hot; pour in some cold!" He added that he would wiggle his toes when the water was cool enough. A certain amount of cold water was added, the toes wiggled, and the pouring was stopped.

Mr. Shattuck turned his attention to study, and the following year went south, where he became a Baptist preacher. He decided that Moore County, North Carolina was too poverty stricken even for a minister and went to join an older brother who had become a planter in Mississippi. He spent the rest of his life in the South, rounding out an otherwise uneventful career.

A staid religious paper of the day had reported the incident as "without precedent."

Bernard Lamere

PART THREE

Regional Forecasts

Thus far all the calculations in this Almanac have been for Boston. The following pages in this Part III will enable readers to adjust these calculations (see pages 91, 92, 96, 102, 108) and weather forecasts (pages 91, 93, 97, 103, and 109) for anywhere in the United States.

1. New England except Boston — see page 91.
2. Eastern States except New England — see pages 92, 93.
3. Midwestern States — see pages 96, 97, 98, 99.
4. Western and Mountain States — see pages 102, 103, 104, 105.
5. Southern States — see pages 108, 109, 110, 111.

DIRECTIONS FOR USING REGIONAL FORECAST PAGES

Simple and easy directions for using the regional forecast pages which follow appear at the top of each of these pages. However, the following additional information which also applies to these pages should be carefully noted.

Weather Forecasts

The OFA has long been known for its "accurate" weather forecasts. In previous editions these have been made for Boston and New England only, with the proviso these could be used elsewhere by considering the weather as forecast would arrive one day earlier for each Time Zone west of Boston. This year, however, on pages 91, 93, 97, 103, and 109 you will find separate weather forecasts for five different regions besides Boston. In reading these forecasts please remember it is impossible today to predict (successfully) the weather for more than a day or two in advance. Every known scientific source for making these 18-months-in-advance forecasts (we go to press in June) has been used. We suggest they will be more useful as weather trends than for the pinpointing of any particular day's weather.

Sun Dials

The column headed "Sun Fast" (pages 24–46) is of primary use to sun dial enthusiasts. The figures therein tell how fast on each day the time indicated by a *properly adjusted and graduated* sun dial will be of the time indicated by a clock. On April 11 sun dial time in Boston will be 15 min. (+15) FAST of Eastern Standard Time (see page 30). The time difference between clock and sun dial time in other cities (see pages 91, 92, 96, 102, 108) will be found by subtracting the value of Key Letter I for that city from the Sun Fast time for Boston (given on pages 24–46). The value of Key Letter I for Pittsburgh (see page 92) is −35 min., so sun dial time in Pittsburgh on April 11 will be 20 min. (+15 minus 35) SLOW of clock time.

Length of Day

The "Length of Day" for Boston (pages 24–46) tells how long the sun will be above the horizon. It is found by subtracting the time of sunrise from that of sunset for each locality. For other cities, see pages 91, 92, 96, 102, 108. For these, after you have determined sunrise and sunset times, subtract the one from the other and you have the length of day.

Moonrise and Moonset

For greater accuracy, include the Constant Additional Correction below.

Longitude of Place	58°–77°	77°–90°	90°–103°	103°–116°	116°–128°	128°–142°	142°–155°
Correction	m 0	m +1	m +2	m +3	m +4	m +5	m +6

BOSTON		PITTSBURGH (Longitude 80° 00′ W.)	
Moonrise (Apr. 11)	5.57 A.M., E.S.T.	Moonrise (Boston)	5.57 A.M.
Key Letter	M	Correction (F from page 92)	+.38
		Constant Additional Correction	+.01
		Moonrise (Pittsburgh)	6.36 A.M., E.S.T.
Moonset	8.17 P.M., E.S.T.	Moonset (Boston)	8.17 P.M.
Key Letter	M	Correction (M from page 92)	+.33
		Constant Additional Correction	+.01
		Moonset (Pittsburgh)	8.51 P.M., E.S.T.

Moon's Place and Age

The moon's place and age is contained on the left-hand Calendar Pages (24–46). This information applies without correction throughout the United States.

Risings and Settings of the Planets

The times of rising and setting of naked-eye planets, with the exception of Mercury, are given for Boston on pages 48–49. To convert these times to those of other localities (pages 91, 92, 96, 102, 108), follow the same procedure as that given on those pages for finding the times of sunrise and sunset.

Dawn and Dark

The approximate times dawn will break and dark descend are found by applying the length of twilight taken from the table below to the times of sunrise and sunset at any specific place. The latitude of the place (see pages 91, 92, 96, 102, 108) determines the column of the table below from which the length of twilight is to be selected.

BOSTON (Latitude 42° 22′ N.)		PITTSBURGH (Latitude 40° 26′ N.)	
Sunrise (Apr. 11)	5.10 A.M.	Sunrise (see page 92)	5.48 A.M.
Length of Twilight (Col. 3 of table)	1.33	Length of Twilight (Col. 3 of table)	1.33
Dawn breaks	3.37 A.M., E.S.T.	Dawn breaks	4.15 A.M., E.S.T.
Sunset	6.21 P.M.	Sunset (see page 92)	6.54 P.M.
Length of Twilight	1.33	Length of Twilight	1.33
Dark descends	7.54 P.M., E.S.T.	Dark descends	8.27 P.M., E.S.T.

LENGTH OF TWILIGHT

Subtract from time of sunrise for dawn.
Add to time of sunset for dark.

Latitude	25°N to 30°N	31°N to 36°N	37°N to 42°N	43°N to 47°N	48°N to 49°N
	h m	h m	h m	h m	h m
Jan. 1 to Apr. 11	1 20	1 26	1 33	1 42	1 50
Apr. 11 to May 3	1 23	1 28	1 39	1 51	2 04
May 3 to May 15	1 26	1 34	1 47	2 02	2 22
May 15 to May 26	1 29	1 38	1 52	2 13	2 42
May 26 to July 23	1 32	1 43	1 59	2 27	—
July 23 to Aug. 4	1 29	1 38	1 52	2 13	2 42
Aug. 4 to Aug. 15	1 26	1 34	1 47	2 02	2 22
Aug. 15 to Sept. 6	1 23	1 28	1 39	1 51	2 04
Sept. 6 to Dec. 31	1 20	1 26	1 33	1 42	1 50

DETERMINATION OF EARTHQUAKES

Note, in this Almanac, on right hand pages, 25-47, the dates when the moon [☾ runs high] or [☾ rides low]. Beginning with the date of the high is the most likely five day earthquake period in the northern hemisphere, with the low in the southern hemisphere. You will also find on these pages a moon on the Equator notation [☾ on Eq.], twice each month. At this time, in both hemispheres, is a two-day quake period.

NODES OF THE MOON

These "moon runs high" and "moon rides low" symbols are also useful as weather predictors. When it runs high, look out for a cool spell or frost — when riding low, there is often a mild spell; in summer, a heat wave.

Two years ago, a prominent bookseller offered for sale an almanack which was said to have been used by George Washington at Mount Vernon. Its calendar pages were covered with "hieroglyphics" in our first President's handwriting. These "hieroglyphics" marked the nodes of the moon each month. In Washington's time, the nodes of the moon were widely used as planting guides.

Table for Adjusting Sun, Moon, Planet Times on Pages 24-46, 48

1. NEW ENGLAND (EXCEPT BOSTON)

The times of sunrise, sunset, moonrise, moonset (pages 24–46) and the planets (page 48) are for Boston only. The table below gives the corrections to be used for anywhere in New England except Boston. Note the Key Letter for any given day (pages 24–46, 48). Then find the column below in which that Key Letter falls. The figure in that column for the city you seek is the minutes to add or subtract for accuracy of within 5 min. for that city. Example: Jan. 12, sunrise (p. 24) is 7:12 A.M. Key Letter N. Key Letter N for Presque Isle (last col. below) shows +4. So sunrise at Presque Isle will be 7:16 A.M. If a city is not listed, interpolate between nearest two cities. (Further explanations appear on pages 89 and 90.)

City	State	Latitude ° ′	Time Used	Key Letters A-D m	E-H m	I m	J-M m	N-Q m
Bridgeport	Conn.	41 10	EST	+13	+10	+ 9	+ 7	+ 4
Hartford-New Britain	Conn.	41 46	EST	+ 9	+ 7	+ 7	+ 6	+ 5
New Haven	Conn.	41 18	EST	+11	+ 9	+ 7	+ 6	+ 4
Norwalk-Stamford	Conn.	41 03	EST	+14	+11	+10	+ 8	+ 5
Waterbury-Meriden	Conn.	41 33	EST	+10	+ 8	+ 7	+ 6	+ 4
Augusta	Maine	44 19	EST	−12	− 7	− 5	− 3	+ 2
Bangor	Maine	44 48	EST	−18	−12	− 6	− 6	0
Eastport	Maine	44 56	EST	−26	−19	−16	−13	− 7
Ellsworth	Maine	44 30	EST	−19	−13	−16	−13	− 2
Portland	Maine	43 39	EST	− 8	− 5	− 3	− 2	+ 2
Presque Isle	Maine	46 40	EST	−29	−17	−13	− 7	+ 4
Brockton	Mass.	42 05	EST	+ 1	0	0	− 1	− 1
Fall River-N. Bedford	Mass.	41 42	EST	+ 3	+ 1	0	0	− 2
Lawrence-Lowell	Mass.	42 42	EST	− 1	0	+ 1	+ 1	+ 2
Pittsfield	Mass.	42 27	EST	+ 8	+ 9	+ 9	+ 9	+ 9
Springfield-Holyoke	Mass.	42 06	EST	+ 7	+ 6	+ 6	+ 6	+ 5
Worcester	Mass.	42 16	EST	+ 3	+ 3	+ 3	+ 3	+ 3
Berlin	N. H.	43 58	EST	− 8	− 3	0	+ 2	+ 8
Keene	N. H.	42 50	EST	+ 5	+ 6	+ 7	+ 8	+ 9
Manchester-Concord	N. H.	42 59	EST	− 1	+ 1	+ 2	+ 3	+ 4
Portsmouth	N. H.	43 10	EST	− 4	− 2	− 1	0	+ 1
Providence	R. I.	41 50	EST	+ 3	+ 3	+ 1	+ 1	0
Brattleboro	Vt.	42 50	EST	+ 3	+ 5	0	+ 1	+ 5
Burlington	Vt.	44 28	EST	+ 1	+ 6	+ 9	+11	+17
Rutland	Vt.	43 35	EST	+ 3	+ 6	+ 8	+ 9	+12
St. Johnsbury	Vt.	44 25	EST	− 4	+ 1	+ 4	+ 6	+12

WEATHER FORECAST —MAINE, NEW HAMPSHIRE, VERMONT

(For Nov.–Dec. 1966 and Jan.–Dec. 1967)

Verification Base: U.S.W.B. Station, Burlington, Vermont

New England experiences a different climate in its northern states than in its southern states. The approximate dates of the storms for Boston (see page 19) will be the same dates these storms reach northern New England and southern New England. The plus (+) listings below indicate, on the dates shown, storms which will **carry more snow** in the north than in Boston.

Nov. (1966): 10–13, snow (+1″); 20–23, rain on coast, snow in mountains (+4″). **Dec.:** 2–5, snow (+4″); 8–10, sleet, snow (+2″); 13–15, snow (+2″); 16–18, snow (+3″); 24–27, snow (+2″); 28–31, snow (+2″).

Feb. (1967): 11–14, snow (+3″). **Mar.:** 1–2, snow (+2″); 16–19, snow (+2″); 23–25, snow (+1″). **Apr.:** 1–6, snow (+2″); 9–13, snow (+2″); 18–21, snow (+2″).

At most northern resorts snowfall should be close to 123″ — or 34″ more than that of Boston.

CONNECTICUT, RHODE ISLAND, CAPE COD

Verification Base: U.S.W.B. Station, Providence, R. I.

As above, only the chief differences are given for the Winter months, between the Boston forecast (page 19) and this area.

Nov. (1966): 11–13, all rain; 19–23, all rain. **Dec.:** 3–5, all rain; 9–11, rain and fog; 14–15, rain; 17–19, sleet; 25–27, snow (6″).

Jan. (1967): 3–4, rain; 8–10, sleet, snow (3″); 15–18, rain, then snow (6″); 23–24, snow (2″); 27–29, snow (5″). **Feb.:** 2–5, snow (2″); 11–14, all rain; 17–19, rain; 24–26, snow (4″), changes to rain. **Mar.:** 1–2, snow (2″); 9–11, rain; 17–18, snow (2″); 23–26, rain. **Apr.:** No snow.

This gives a snowfall in this area of only 32″ compared with Boston's 89″ and the north country's 123″.

2. EASTERN STATES (EXCEPT NEW ENGLAND)

The times of sunrise, sunset, moonrise, moonset (pages 24–46) and the planets (page 48) are for Boston only. The table below gives the corrections to be used for cities in the Eastern States, except New England. Note the Key Letter for any given day (pages 24–46, 48). Then find the column below in which that Key Letter falls. The figure in that column for the city you seek is the minutes to add or subtract for accuracy of within 5 min. for that city. Example: Jan. 12, sunrise (p. 24) is 7:12 A.M., Key Letter N. Key Letter N for New York City (last col. below) shows +6. So sunrise New York City would be 7:18 A.M. If a city is not listed, interpolate between nearest two cities. (Further explanations appear on pages 89 and 90.)

City	State	Latitude ° ′	Time Used	Key Letters A-D m	E-H m	I m	J-M m	N-Q m
Wilmington	Del.	39 45	EST	+27	+21	+18	+15	+ 9
Washington	D. C.	38 54	EST	+35	+28	+24	+20	+12
Baltimore	Md.	39 17	EST	+32	+26	+22	+19	+12
Hagerstown	Md.	39 40	EST	+36	+30	+27	+24	+17
Salisbury	Md.	38 25	EST	+31	+22	+18	+14	+ 5
Albany	N. Y.	42 39	EST	+10	+10	+11	+11	+12
Binghampton	N. Y.	42 06	EST	+20	+20	+19	+19	+18
Buffalo	N. Y.	43 00	EST	+26	+29	+31	+33	+37
New York	N. Y.	40 45	EST	+17	+13	+12	+10	+ 6
Ogdensburg	N. Y.	44 45	EST	+ 8	+15	+18	+21	+27
Syracuse	N. Y.	43 03	EST	+18	+20	+20	+21	+23
Atlantic City	N. J.	39 22	EST	+24	+17	+13	+10	+ 3
Camden	N. J.	39 57	EST	+24	+19	+16	+13	+ 8
Cape May	N. J.	39 05	EST	+27	+19	+15	+12	+ 4
Newark-Irvington-E. Orange	N. J.	40 44	EST	+18	+14	+12	+11	+ 7
Paterson	N. J.	40 55	EST	+17	+14	+12	+11	+ 7
Trenton	N. J.	40 13	EST	+21	+17	+15	+12	+ 7
Allentown-Bethlehem	Pa.	40 36	EST	+23	+19	+17	+15	+11
Erie	Pa.	42 07	EST	+37	+36	+36	+36	+35
Harrisburg	Pa.	40 16	EST	+30	+26	+23	+21	+16
Lancaster	Pa.	40 02	EST	+29	+24	+21	+18	+13
Philadelphia-Chester	Pa.	39 57	EST	+25	+20	+17	+14	+ 8
Pittsburgh-McKeesport	Pa.	40 26	EST	+42	+38	+35	+33	+29
Reading	Pa.	40 20	EST	+26	+22	+19	+17	+12
Scranton-Wilkes Barre	Pa.	41 25	EST	+23	+20	+19	+18	+15
York	Pa.	39 58	EST	+31	+25	+23	+20	+14
Charlottesville	Va.	38 02	EST	+43	+34	+30	+25	+16
Danville	Va.	36 31	EST	+49	+38	+32	+26	+15
Norfolk	Va.	36 51	EST	+37	+27	+21	+15	+ 5
Richmond	Va.	37 32	EST	+40	+31	+25	+20	+11
Roanoke	Va.	37 16	EST	+51	+41	+35	+30	+20
Winchester	Va.	39 13	EST	+38	+32	+28	+25	+19
Charleston	W. Va.	38 21	EST	+54	+46	+42	+38	+30
Parkersburg	W. Va.	39 21	EST	+52	+45	+42	+38	+32

THE DROUGHT

As this almanac goes to press (June 1, 1966), New York's Mayor Lindsay has lifted most of the restrictions on the use of water. This would be, at long last, official confirmation that the drought in that area (Eastern Pennsylvania, New York State, etc.) is over. For some months now we have been amused by the hue and cry, including those of the **New York Times'** editors, about how there wasn't going to be any "runoff" this Spring, about probable deficiency of 1966 rainfall, about a few millions for a Hudson River pumping station (built but never used — as in 1956) and now about a great Federal Rainmaking Project this Summer in the area (about all that will go down **that** drain will be taxpayers' money).

Now all these people laughed at us when, as long ago as November 1965, we announced this drought was over. (This conclusion came from the OFA forecast made up in June of '65. We don't feel Old Abe deserves too much credit in this, as any schoolboy with the records back to 1870 in hand would see that droughts around here just don't last **that** long. What we do feel is that intelligent (which they are) weather bureau officials, state and city department heads, politicians, and editors are too prone to get on any bandwagon that just might bring in higher appropriations. We stand aghast, astounded, and **shocked** that these individuals will now allow rainmaking millions for an area in which the rains obviously are normally making an appearance. By forcing these rains (if indeed the rainmakers can), many farmers, vacationists, fruitgrowers may be hurt by **their own** tax money. If Arizona can pump water all the way from Seattle or Alaska, New York and Pennsylvania can pipe it from the Great Lakes — or go underground where, the U. S. Geological Survey tells us, there is more water than this or any future generation will ever use.

WEATHER FORECAST — EASTERN STATES, EXCEPT NEW ENGLAND

(For Nov.–Dec. 1966 and Jan.–Dec. 1967)

This forecast is based, for verification purposes, at the U.S.W.B. Station at Pittsburgh, Pennsylvania. It is designed to serve the following states: Delaware, District of Columbia, Maryland, New York, New Jersey, Pennsylvania, Virginia, and West Virginia. The precipitation quantities given are all normal for Pittsburgh, as 1967 would seem to be a normal year. Those living in other localities should adjust the quantities of rain or snow to what is normal for where they live — but these forecasts should be useful in all the states listed for the days on which to expect storms, or to expect it to clear.

The Winter months (Nov., Dec. 1966, Jan., Feb., Mar., Apr. 1967) will resemble, as closely as they ever will, a real "Old-fashioned Winter."

MONTH BY MONTH

Nov. (1966): 1–3, clear; 4–5, rain 1″; 6–9, clear; 10–12, rain 1″; 13–18, clear; 19–22, unsettled; 23–24, clear; 25–29, rain 1″; 30, clear.

Dec. (1966): 1, clear; 2–4, rain .5″; 5–7, clear; 8–10, rain .5″; 11–12, clear; 13–14, rain .5″; 15, clear; 16–18, snow 6″; 19–24, clear; 25–27, snow 10″; 28–31, clear.

Jan. (1967): 1, clear; 2–3, rain .5″; 4–6, clear; 7–9, rain .5″; 10–13, clear; 14–16, snow 5″; 17–21, real cold; 22–23, snow 6″; 24–25, clear; 26–28, snow 8″; 29–31, clear.

Feb.: 1–3, snow 10″; 4–9, clear; 10–14, snow 10″; 15–16, clear; 17–18, snow 6″; 19–22, clear; 23–25, snow 10″; 26–28, clear.

Mar.: 1–4, rain .5″; 5–7, clear; 8–11, rain 1″ or snow; 12–15, clear; 16–20, rain .5″; 21–22, clear; 23–26, heavy rain 1.5″; 27–29, clear; 30–31, rain .25″.

Apr.: 1–4, rain .75″; 5–6, clear; 7–11, rain 1″; 12–15, clear; 16–18, rain 1″; 19–20, clear; 21–25, rain .5″; 26–28, clear; 29–30, rain .1″.

May: 1, rain .15″; 2–3, clear; 4–6, rain .5″; 7, clear; 8–10, rain 1″; 11–13, clear; 14–17, rain .25″; 18–20, clear; 21–24, heavy rain 1″; 25, clear; 26–30, rain 1″; 31, clear.

June: 1, clear; 2–4, rain .75″; 5–6, clear; 7–9, rain .75″; 10–11, clear; 12–14, rain .75″; 15–17, clear; 18–22, rain .75″; 23–28, clear; 29–30, rain .25″.

July: 1, clear; 2–3, rain .5″; 4–6, hot; 7–12, rain .75″; 13–17, hot; 18–20, rain .5″; 21–25, clear; 26–28, rain .25″; 29–31, clear.

Aug.: 1, clear; 2–5, rain .5″; 6–8, clear; 9–11, rain .5″; 12–13, clear; 14–18, rain 1″; 19–21, clear; 22–27, rain .5″; 28–31, clear.

Sept.: 1–4, rain 1″; 5–7, clear; 8–10, rain .5″; 11–12, clear; 13, rain .25″; 14, clear; 15–19, rain .5″; 20–21, clear; 22–23, rain .4″; 24–26, clear; 27–29, rain .35″; 30, clear.

Oct.: 1–2, rain .5″; 3–9, clear; 10–13, rain .75″; 14–16, clear; 17–19, rain 1″; 20–21, clear; 22–24, rain .5″ changing to snow; 25–26, clear; 27–31, rain .25″.

Nov.: 1–3, rain .75″; 4–6, clear; 7–10, rain .5″; 11–14, clear; 15–17, rain .5″; 18–19, clear; 20–21, rain .25″; 22–24, clear; 25–27, snow or rain 1″; 28–29, clear; 30, rain .25″.

Dec.: 1–2, rain .25″; 3, clear; 4–5, rain .5″; 6–7, clear; 8–10, rain .5″ turns to snow; 11–13, clear; 14–17, rain .5″ or snow 6″; 18–22, clear; 23–27, snow 6″, some rain; 28–29, clear; 30–31, sleet .25″.

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3. MIDWESTERN STATES

The times of sunrise, sunset, moonrise, moonset (pages 24–46) and the planets (page 48) are for Boston only. The table below gives the corrections to be used for cities in the Midwest. Note the Key Letter for any given day (pages 24–46, 48). Then find the column below in which that Key Letter falls. The figure in that column for the city you seek is the minutes to add or subtract for accuracy of within 5 min. for that city. Example: Jan. 12, sunrise (p. 24) is 7:12 A.M., Key Letter N. Key Letter N for Chicago (last col. below) shows +4. So sunrise at Chicago will be 7:16 A.M., CST. If a city is not listed, interpolate between nearest two cities. (Further explanations appear on pages 89 and 90.)

City	State	Latitude ° ′	Time Used	Key Letters A-D m	E-H m	I m	J-M m	N-Q m
Cairo	Ill.	37 05	CST	+30	+18	+12	+ 7	− 5
Chicago-Oak Park	Ill.	41 52	CST	+ 7	+ 6	+ 5	+ 5	+ 4
Danville	Ill.	40 07	CST	+13	+ 8	+ 5	+ 3	− 2
Decatur	Ill.	39 51	CST	+20	+14	+12	+ 9	+ 3
E. St. Louis	Ill.	38 38	CST	+29	+21	+17	+12	+ 4
Peoria	Ill.	40 42	CST	+20	+16	+14	+12	+ 7
Rockford	Ill.	42 17	CST	+12	+12	+12	+12	+12
Springfield	Ill.	39 48	CST	+23	+17	+14	+12	+ 6
Fort Wayne	Ind.	41 04	EST	+61	+58	+56	+55	+52
Gary	Ind.	41 36	CST	+ 7	+ 6	+ 5	+ 4	+ 2
Indianapolis	Ind.	39 46	EST	+69	+63	+60	+57	+52
Muncie	Ind.	40 11	EST	+65	+60	+57	+55	+50
South Bend	Ind.	41 41	CST	+ 3	+ 2	+ 1	0	− 2
Terre Haute	Ind.	39 28	CST	+15	+ 8	+ 5	+ 2	− 5
Council Bluffs	Iowa	41 16	CST	+43	+40	+39	+38	+35
Davenport	Iowa	41 31	CST	+21	+19	+18	+17	+15
Des Moines	Iowa	41 35	CST	+33	+31	+30	+29	+27
Dubuque	Iowa	42 30	CST	+18	+18	+18	+19	+19
Sioux City	Iowa	42 30	CST	+41	+41	+41	+41	+42
Waterloo	Iowa	42 29	CST	+25	+25	+25	+25	+26
Fort Scott	Kans.	37 55	CST	+49	+39	+34	+30	+20
Liberal	Kans.	37 03	CST	+77	+65	+60	+54	+42
Oakley	Kans.	39 07	MST	+10	+ 3	− 1	− 4	−12
Salina	Kans.	38 53	CST	+58	+50	+46	+42	+34
Topeka	Kans.	39 03	CST	+49	+42	+38	+35	+27
Wichita	Kans.	37 42	CST	+60	+50	+45	+40	+30
Cheboygan	Mich.	45 40	EST	+41	+50	+54	+57	+66
Detroit-Dearborn	Mich.	42 20	EST	+48	+48	+48	+48	+48
Flint	Mich.	43 01	EST	+48	+50	+51	+51	+53
Grand Rapids	Mich.	42 58	EST	+56	+58	+58	+59	+61
Ironwood	Mich.	46 40	CST	0	+11	+16	+21	+32
Jackson	Mich.	42 15	EST	+54	+53	+53	+53	+53
Kalamazoo	Mich.	42 17	EST	+58	+58	+58	+58	+58
Lansing	Mich.	42 44	EST	+53	+54	+54	+54	+55
Pontiac	Mich.	42 40	EST	+48	+49	+49	+49	+50
Traverse City	Mich.	44 50	EST	+49	+55	+58	+61	+67
Albert Lea	Minn.	43 40	CST	+25	+28	+29	+31	+34
Bemidji	Minn.	47 30	CST	+15	+29	+35	+42	+56
Duluth	Minn.	46 47	CST	+ 7	+19	+24	+30	+42
Minneapolis-St. Paul	Minn.	44 57	CST	+19	+26	+29	+32	+39
Ortonville	Minn.	45 20	CST	+30	+38	+41	+45	+53
Jefferson City	Mo.	38 32	CST	+37	+29	+25	+20	+12
Joplin	Mo.	37 04	CST	+51	+39	+34	+28	+17
Kansas City	Mo.	39 05	CST	+45	+38	+34	+30	+23
Poplar Bluff	Mo.	36 40	CST	+35	+23	+17	+11	− 1
St. Joseph	Mo.	39 46	CST	+44	+38	+35	+32	+26
St. Louis	Mo.	38 38	CST	+29	+21	+17	+12	+ 4
Springfield	Mo.	37 13	CST	+46	+34	+29	+23	+12
Chadron	Neb.	42 50	CST	+66	+67	+68	+68	+70
Grand Island	Neb.	40 52	CST	+54	+51	+49	+48	+44
Lincoln	Neb.	40 49	CST	+48	+44	+43	+41	+37
Norfolk	Neb.	42 01	CST	+47	+46	+45	+45	+44
North Platte	Neb.	41 10	CST	+63	+60	+59	+57	+55
Omaha	Neb.	41 16	CST	+43	+41	+40	+38	+36
Sidney	Neb.	41 08	CST	+72	+69	+67	+66	+63
Bismarck	N. D.	46 48	CST	+42	+53	+59	+64	+77
Fargo	N. D.	46 52	CST	+25	+37	+43	+49	+61
Grand Forks	N. D.	47 56	CST	+22	+37	+44	+51	+67
Minot	N. D.	48 15	CST	+37	+54	+61	+68	+85
Williston	N. D.	48 10	CST	+47	+63	+70	+78	+94
Akron	Ohio	41 05	EST	+46	+43	+42	+40	+37
Canton	Ohio	40 48	EST	+47	+43	+41	+39	+36
Cincinnati-Hamilton	Ohio	39 06	EST	+64	+57	+54	+50	+43
Cleveland-Lakewood	Ohio	41 30	EST	+46	+43	+42	+42	+40
Columbus	Ohio	39 58	EST	+56	+50	+48	+45	+40
Dayton-Springfield	Ohio	39 46	EST	+58	+55	+52	+49	+43
Lima	Ohio	40 45	EST	+58	+54	+52	+50	+47
Toledo	Ohio	41 39	EST	+52	+51	+50	+49	+47
Youngstown	Ohio	41 06	EST	+43	+40	+38	+37	+34
Aberdeen	S. D.	45 30	CST	+38	+46	+50	+54	+62

MIDWESTERN STATES (Continued)

City	State	Latitude °	′	Time Used	Key Letters A-D m	E-H m	I m	J-M m	N-Q m
Murdo	S. D.	43	53	CST	+53	+57	+59	+60	+65
Pierre	S. D.	44	21	CST	+50	+55	+57	+59	+65
Rapid City	S. D.	44	05	CST	+62	+67	+69	+71	+75
Sioux Falls	S. D.	43	33	CST	+38	+41	+43	+44	+47
Eau Claire	Wis.	44	51	CST	+13	+19	+22	+25	+31
Green Bay	Wis.	44	30	CST	0	+ 5	+ 8	+10	+16
LaCrosse	Wis.	43	40	CST	−15	−19	+21	+22	+26
Madison	Wis.	43	04	CST	+11	+12	+13	+14	+16
Milwaukee	Wis.	43	02	CST	+ 5	+ 7	+ 7	+ 8	+10
Oshkosh	Wis.	44	01	CST	+ 2	+ 6	+ 8	+10	+15
Wausau	Wis.	44	56	CST	+ 5	+12	+15	+18	+25
Montreal	Que.	45	30	EST	− 4	+ 5	+10	+15	+23
Quebec	Que.	46	45	EST	−19	− 6	+ 1	+ 8	+20
Toronto	Ont.	43	45	EST	+29	+31	+33	+36	+38

WEATHER FORECAST — MIDWESTERN STATES

(For Nov.–Dec. 1966 and Jan.–Dec. 1967)

This forecast is based on the U.S.W.B. Station in Chicago, Illinois. It is designed to serve the following states: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; also Montreal, Quebec, and Toronto. It is obvious that weather in the Dakotas will be more extreme than that along the Great Lakes. However, all of these states should fall into the storm tracks which originate near Saskatchewan and come down across the plains — sometimes on more southerly courses than at other times. For this reason, the days of storm beginnings and endings should serve well for all — even though the actual quantities of rain and snow may differ from state to state.

For reasons of space, only the storm dates are given. and dates in between should be assumed as "clear." The Winter of 1966 (Nov.-Dec.) and (Jan.-Apr.) 1967 will be one of heavy snow, blizzards, and slightly warmer than the same period a year ago. On the whole, the precipitation given is the normal, as this is expected to be a normal year.

MONTH BY MONTH

Nov. (1966): 2–4, rain 1″ 8–10, rain 1″; 18–20, snow flurries; 25–28, rain .5″.

Dec. (1966): 1–3, rain 1″; 8–9, rain .5″; 10–13, unsettled; 15–17, snow 6″; 24–26, snow 6″; 30–31, sleet .5″.

Jan. (1967): 5–8, rain .5″, warm; 9, cold; 12–14, snow 5″; 18–20, rain 1″ or snow; 25–27, snow 6″; 31, rain 1″.

Feb.: 1–3, rain .75″ or snow; 9–13, rain .75″ or snow; 16–18, rain .75″; 22–25, snow 10″, prec. .75″; 28, rain .75″.

Mar.: 1–4, rain .25″; 7–9, rain .5″ or snow; 13–16, blizzard, prec. 5″; 20–24, rain .75″; 25–31, thunderstorms and tornadoes, prec. .5″.

Apr.: 1–4, rain 1″; 5–8. tornadoes, thunderstorms, 1″ rain; 15–18, rain .75″; 21–23, rain .25″; 24–30, unsettled, with occ. tornadoes or thunderstorms, prec. .5″.

May: 3–6, thunderstorms, rain 1″; 8–10, rain 1″; 15–16, rain 1″; 21–23, rain 1″; 26–29, rain 1″.

June: 1–3, rain .75″; 7–9, rain, .75″; 13–15, rain .75″; 19–21, deluge .75″; 26–27, rain .25″; 29–30, hot.

July: 1–2, rain, hail, floods 1″; 6–10, rain 1″; 17–21, rain .75″; 24–25, rain .25″.

Aug.: 1–4, rain .25″ 9–11, rain .25″; 14–18, rain 1″; 22–27, rain .5″.

Sept.: 1–3, rain .5″; 7–9, rain .5″; 12, rain .25″; 14–18, rain .75″; 20, rain .4″; 26–29, rain .6″.

Oct.: 1, rain .5″; 9–12, rain 1″; 16–18, rain 1″; 21–23, rain 1″; 26–28, rain .5″.

Nov.: 1–2, rain .5″; 6–8, rain .5″; 11–14, rain 1″; 19–20, rain .5″; 24–26, rain .5″, some snow too; 29–30, rain .25″.

Dec.: 1, rain .25″; 4–5, rain .5″; 8–10, rain .5″ turns to snow; 13–16, rain .5″; (or snow 6″); 22–25, snow 4″; 29–31, sleet .25″.

BURNING OF CHICAGO, OCTOBER 8 AND 9, 1871

THE GREAT CHICAGO FIRE

"Blackened and bleeding, panting, prone
On the charred fragments of her shattered throne,
Lies she who stood, but yesterday, alone." — *Bret Harte*

On Sunday and Monday, October 8 and 9, 1871, there occurred in Chicago a fire unparalleled in the history of the world. The fire originated in a small frame structure in the rear of No. 137 DeKoven Street, used as a cow-stable. It was discovered at about half-past nine o'clock in the evening, by a policeman, when it was very small, and who, hoping to extinguish it without sounding an alarm, set himself to work to do so — a fatal miscalculation. A strong southwesterly wind was blowing at the time; no rain had fallen for several weeks previous. It began in an area occupied by several planing mills, shingle mills, and factories.

The flames shot with frightful rapidity from house to house and from board-yard to board-yard, all human means appearing utterly powerless to stay their progress. Unfortunately, one of the first public buildings reached by the fire was the water-works; this cut off the water supply, rendering the fire department useless.

The awful gale which prevailed filled the air with live coals, and hurled to an immense distance, in every direction, blazing brands and boards — a widespread besom of furious destruction. All of the leading banks of the city, several of the stone church edifices, costly and elegant in the extreme; the beautiful railroad depot of the Michigan Southern and the Rock Island railway companies, also that of the Illinois Central and the Michigan Central railroads; the court-house and the chamber of commerce; the Sherman, Tremont, Briggs, Palmer, Bigelow, Metropolitan, and several other hotels, as well as the gigantic Pacific, which was in process of construction; all the great newspaper establishments; the Crosby opera-house, McVicker's theater, and every other prominent place of amusement; the post-office, telegraph offices, Farwell hall, the magnificent Drake-Farwell block, the stately dry goods palaces of J. V. Farwell & Co., Field, Leiter & Co., scores of elegant residences in Wabash and Michigan Avennes, numbers of elevators in which were stored millions of bushels of grain; in fact, all that the hand of man had fashioned or reared was completely swept away, as the fire madly rushed to the north.

With tremendous force, the mighty and uncontrollable element, rushing to the main channel of the river, near its entrance into Lake Michigan, consumed the bridges, and attacked the north division with relentless fury. All day, on Monday, and through the succeeding night, it waged its work of devastation, advancing from block to block, and from street to street, over a vast surface, sparing scarcely anything.

The destruction of palatial residences and magnificent churches continued, while stores and dwellings by the hundreds, together with the costly water-works, the north side gas-works, Rush Medical College, the Chicago and North-western railway depot, several immense breweries, coal yards, lumber yards, and manufacturing establishments of various kinds, and in great numbers, yielded to the resistless enemy.

One of the most fearfully thrilling scenes of the great conflagration occurred in the eastern section of the north division. When it became apparent that all hope of saving the city was lost, after the flames had pushed down to the main branch of the river, the citizens of the north side, who had come over to see the main theater of the fire, thought it time to beat a rapid retreat toward the tunnel and bridges. The former of these thoroughfares was impassable at three o'clock. Clark Street had not been opened for some time, and State Street was in a blaze from one end to the other. Rush Street Bridge proved to be the only means of getting away from the south side, and over that bridge the affrighted fugitives poured in thousands. Having reached Chicago Avenue, the conflagration took an eastward turn, and cut off from flight northward all who remained in the unburned section lying between Dearborn Street and the lake.

And now a scene transpired, which, as described, was scarcely ever equaled. Houses were abandoned in all haste. Into wagons were thrown furniture, clothing, and bedding. Mothers caught up their infants in their arms. Men dragged along the aged and helpless, and the entire horror-stricken multitude beat their course to the sands. It was a hegira never to be forgotten.

The number of acres burned over in the West Division of the city, where the fire originated, was nearly two hundred, including 16 acres which were laid bare by a fire of the previous evening. This district contained about 500 buildings, averaging four or five occupants each. These buildings were generally of the poorer class, and comprised a great many boarding-houses, saloons, and minor hotels, with a few factories, also several lumber and coal yards and planing mills, a grain elevator, and a depot.

In the South Division, the burned area comprised some 460 acres. With the exception of the Lind Block, on the river bank, between Randolph and Lake Streets, it included all north of an irregular line running diagonally from the intersection of Polk Street with the river, to the corner of Congress Street and Michigan Avenue. This district, though comparatively small in extent, was by far the most valuable in the city — the very heart and head of Chicago as a commercial center. It contained the great majority of all those structures which were at once costly in themselves, and filled with the wealth of merchandise that made the city the great emporium of the Northwest. All the wholesale stores of any considerable magnitude, all the daily and weekly newspaper offices, all the principal banks, the leading hotels, many extensive factories, all the offices of insurance men, lawyers, produce brokers, etc., the custom-house, court-house, chamber of commerce, all the prominent public halls and places of amusement, many coal yards, the monster Central Railroad depot, with its various buildings for the transaction of business of the Illinois Central, Michigan Central, and Chicago, Burlington and Quincy Railroads, &c. There were nearly 3700 buildings destroyed in this division, including 1600 stores, 28 hotels, 60 manufacturing establishments, and the homes of about 22,000 people.

In the North Division, the flames swept nearly 1500 acres, destroying 13,300 buildings, the homes of nearly 75,000 people. These structures included more than 600 stores and 100 manufacturing establishments, including McCormick's reaper factory, a sugar refinery, box mills, etc. The lake shore, from Chicago Avenue north, was lined with breweries. The river banks were piled high with lumber and coal, three grain elevators stood near the fork of the river, and near them the Galena depot. Many hotels, and private storehouses for produce and other property, also existed in this neighborhood, and the wholesale meat markets on Kinzie Street were a busy center of trade. North Clark, Wells, and North and Chicago Avenues, were principally occupied by retail stores.

The total area burned over was 2,124 acres, or almost 3⅓ square miles. This area contained about 73 miles of streets, and 17,450 buildings, the homes of nearly 100,000 people. All this transpired in the brief space of 30 hours, and the aggregate loss was not far from $200 million. But saddest of all was the great loss of life, the precise extent of which will probably never be known.

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Etoile De Hollande	Pink Radiance	Cl. Blaze Red	K. A. Victoria	Eclipse	President Hoover
Red Radiance	The Doctor	Cl. Poinsettia	Caledonia	Golden Charm	Betty Uprichard
Better Times	Columbia	Cl. Red Talisman	F. K. Druski	Peace	Edith N. Perkins
Crimson Glory	Picture	Cl. Golden Charm	K. Louise	Luxemburg	Contrast

FLOWERING SHRUBS—1 to 2 Feet Tall

ALTHEA; Double Red, Purple, or White ..... .15 ea.
ABELIA; Shell Pinkish ..... .18 ea.
RED WEIGELIA; Deep Red Flowers ..... .15 ea.
WEIGELIA; Pink or Yellow ..... .19 ea.
RED BUSH HONEYSUCKLE; Red Clusters ..... .15 ea.
BUSH HONEYSUCKLE; Pink or White ..... .39 ea.
RED LEAF BARBERRY ..... .19 ea.
SPIREA VAN HOUTTEI; White ..... .38 ea.
SPIREA; Anthony Waterer Dwarf Red ..... .15 ea.
PINK SPIREA ..... .39 ea.
BRIDAL WREATH SPIREA; Double White ..... .19 ea.
RED CORALBERRY ..... .15 ea.
FORSYTHIA; Yellow Flowers ..... .25 ea.
RED FLOWERING QUINCE ..... .15 ea.
DEUTZIA; or Mockorange ..... .39 ea.
JAPANESE SNOWBALL ..... .29 ea.
PERSIAN LILAC; Orchid Color ..... .49 ea.
OLD TIME LILAC; Large Purple ..... .49 ea.
FLOWER ALMOND; Double Pink ..... .35 ea.
TAMARIX; Lovely Pink Flowers ..... .15 ea.
RED OZIER DOGWOOD ..... .12 ea.
HIBISCUS; Giant Blooms ..... .19 ea.
HYDRANGEA; Arborescens Collected ..... .25 ea.
HYDRANGEA; Hills of Snow ..... .19 ea.
PUSSY WILLOW ..... .18 ea.
RUSSIAN OLIVE ..... .15 ea.
SWEET SNRUB; Reddish Brown Flowers ..... .25 ea.
CYDONIA JAPONICA; Orange Red ..... .09 ea.
ALTHEA ROSE SHAROH; Mixed Colors ..... .45 ea.
CRAPE MYTRLE; Red or Pink ..... .95 ea.
FRENCH LILAC; Red, White, Purple ..... .59 ea.
HAROY AZALEA; Red, Pink, White ..... .49 ea.
BUTTERFLY BUSH; Purple, Pink ..... .15 ea.
SCOTCH BROOM; Golden Flowers .....

FLOWERING TREES

MAGHOLIA GRAHOTFLORA; 1 to 2 ft. ..... .49 ea.
PINK FLOWERING DOGWOOD; 2 to 3 ft. ..... 1.59 ea.
PINK FLOWERING DOGWOOD; 3½ to 5 ft. ..... 2.98 ea.
WHITE FLOWERING DOGWOOD; 2 to 3 ft. ..... .18 ea.
WHITE FLOWERING DOGWOOD; 4 to 6 ft. ..... .79 ea.
*TULIP TREE; 3½ to 5 ft. ..... .39 ea.
FLOWERING PEACH; Red, Pink, 2 to 3 ft. ..... .49 ea.
FLOWERING CRAB; Red, Pink, 2 to 3 ft. ..... .59 ea.
PINK FLOWERING MIMOSA; 3 to 4 ft. ..... .29 ea.
VELVET ASH; 1 to 2 ft. ..... .39 ea.
JAPANESE FLOWERING CHERRY; 2 to 3 ft. ..... 1.49 ea.
PURPLE LEAF PLUM; 2½ to 4 ft. ..... .45 ea.
CHINESE RED BUD; 1 to 2 ft. ..... .69 ea.
GOLDEN RAIN TREE; 1 to 2 ft. ..... .55 ea.
GOLDEN CHAIN TREE; 1 to 2 ft. ..... .69 ea.
SMOKE TREE; 1 to 2 ft. ..... 1.25 ea.
AMERICAN RED BUD; 3 ft., 25 ea., 4 to 6 ft. ..... .68 ea.
*TREE OF HEAVEN; 3½ to 5 ft. ..... .39 ea.
MAGNOLIA SOULANCEANA; 1 to 2 ft. ..... .98 ea.
EUROPEAN MOUNTAIN ASH; 3 to 4 ft. ..... 3.88 ea.
PAUL'S SCARLET HAWTHORN; 3½ to 5 ft. ..... 3.98 ea.
DOUBLE PINK FLOWERING CHERRY; 3 to 4 ft. ..... 2.98 ea.

FAST GROWING SHADE TREES

SILVER MAPLE; 3½ to 5 ft. ..... .19 ea.
CHINESE ELM; 3½ to 5 ft. ..... .25 ea.
CHINESE ELM; 5½ to 7 ft. ..... .49 ea.
LOMBAROY POPLAR; 3½ to 5 ft. ..... .19 ea.
LOMBAROY POPLAR; 5½ to 7 ft. ..... .48 ea.
WEEPING WILLOW; 4 to 6 ft. ..... .48 ea.
SUGAR MAPLE; Collected, 3½ to 5 ft. ..... .39 ea.
PIN OAK; SCARLET OAK; 3½ to 5 ft. ..... .78 ea.
FAASEN RED LEAF MAPLE; 3½ to 5 ft. ..... 3.48 ea.
WHITE BIRCH; 2 to 3 ft. ..... .45 ea.
SYCAMORE; 3½ to 5 ft. ..... .39 ea.
SWEET GUM TREE; 2 to 3 ft. ..... .38 ea.
GINKGO TREE; 1 to 2 ft. ..... .69 ea.

CATALPA; FISH BAIT TREE; 2 to 3 ft. ..... .25 ea.
CRIMSON KING MAPLE (Pat. No. 735); 3½ to 5 ft. ..... 3.49 ea.
SUNBURST LOCUST (Pat. No. 1313), 4½ to 6 ft. ..... 4.85 ea.
ROBINA TREE, BLACK LOCUST; 3 to 4 ft. ..... .49 ea.
CUTLEAF WEEPING BIRCH; 3 to 4 ft. ..... 2.98 ea.
JAPANESE RED LEAVED MAPLE; 1 to 2 ft. ..... 1.25 ea.
SASSAFRAS; 2 to 3 ft. ..... .59 ea.

EVERGREENS—For Lasting Beauty

PFITZER JUNIPER—IRISH JUNIPER; ½ to 1 ft. ..... .48 ea.
NETZI HOLLY—DWARF HOLLY; ½ to 1 ft. ..... .49 ea.
*AMERICAN HOLLY; RED BERRIED; ½ to 1 ft. ..... .18 ea.
NANOINA; RED BERRIES; ½ to 1 ft. ..... .49 ea.
BOXWOOD, TINY LEAVES; ½ to 1 ft. ..... .35 ea.
CHERRY LAUREL; ½ to 1 ft. ..... .29 ea.
*MOUNTAIN LAUREL; 1 ft. ..... .15 ea.
*CANADIAN HEMLOCK; 1 ft. ..... .15 ea.
*RHODODENDRON; ½ to 1 ft. ..... .29 ea.
*LARGE LEAF FERN ..... .15 ea.
RED BERRY PYRACANTHA; ½ ft. ..... .49 ea.
COLORADO BLUE SPRUCE; ½ to 1 ft. ..... .39 ea.
WAX LEAF LIGUSTRUM; ½ to 1 ft. ..... .29 ea.
BURFORD HOLLY; ½ to 1 ft. ..... .48 ea.
WHITE PINE; ½ to 1 ft. ..... .19 ea.
JAPANESE YEW; ½ to 1 ft. ..... .89 ea.
GOLDEN-OR GREEN ARBORVITAE; ½ to 1 ft. ..... .69 ea.
EUONYMUS COLORATUS-WINTER CREEPER; 1 yr. ..... .29 ea.
EUONYMUS RADICANS; ½ to 1 ft. ..... .19 ea.

VINES AND FRUITS

RED SCARLET HONEYSUCKLE ..... .25 ea.
PURPLE WISTERIA ..... .25 ea.
BITTER SWEET ..... .17 ea.
*CLEMATIS VINE ..... .19 ea.
ENGLISH IVY ..... .39 ea.
VINCA MINOR ..... .09 ea.
TRUMPET VINE ..... .15 ea.
DEWBERRY—1 yr. plants ..... .25 ea.
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10 ASPARAGUS—for 1.00
10 RHUBARB—for 1.00

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APPLE TREES; Red and Yellow Delicious, Stayman Winesap, Early Harvest, Red Rome Beauty, Prices: 2 to 3 ft. .49 ea., 3½ to 5 ft. ..... .98 ea.
PEACH TREES; Elberta, Belle Ga., Hale Haven, Golden Jubilee, Dixie Red, Prices 2 to 3 ft. 45 ea., 3½ to 5 ft. ..... .78 ea.
S-N-1 APPLE; 5 Varieties on ea. Tree, 3 to 4 ft. ..... 2.48 ea.
PLUM, Burbank, Metheley, 2 to 3 ft. 49 ea., 3½ to 5 ft. ..... .85 ea.
PEAR; Kieffer, Bartlett, 2 to 3 ft. .85 ea., 4 to 5 ft. ..... 1.69 ea.
MONTMORENCY CHERRY; 2 to 3 ft. ..... .85 ea.
APRICOT TREE; 2 to 3 ft. .59 ea., 3½ to 5 ft. ..... 1.25 ea.
ENGLISH WALNUT; 2 to 3 ft. ..... 2.48 ea.
BUTTER NUT; 1 to 2 ft. ..... .38 ea.
HAZEL NUT; 1 to 2 ft. ..... .59 ea.
HAROY PECAN SEEDLINGS; 1 to 2 ft. ..... .89 ea.
CHINESE CHESTNUT; 1 to 2 ft. ..... .69 ea.
PAPERSHELL PECAN; 3 to 4 ft. ..... 3.48 ea.
DWARF PEACH; Elberta, 2 to 3 ft. ..... 1.99 ea.
DWARF APPLE; Red and Yellow Delicious, 2 to 3 ft. ..... 1.89 ea.
DWARF PEAR; Bartley, 2 to 3 ft. ..... 2.49 ea.
DWARF PLUMS; 2 to 3 ft. ..... 2.49 ea.
DWARF MONTMORENCY CHERRY; 2 to 3 ft. ..... 2.48 ea.

HEDGE PLANTS—1 to 2 Feet Tall

50 SOUTH PRIVET EVERGREEN HEDGE for ..... .08
25 MULTIFLORA ROSE for 1.25
25 GOLDEN BORDER FORSYTHIA for 2.00
25 LOMBAROY POPLAR; For Hedge for 2.00
*25 EVERGREEN HEMLOCK HEDGE for 3.50
*25 RED CEDAR for 2.50
*25 SHORT LEAF PINE for 2.50
25 CALIFORNIA PRIVET HEDGE for 1.50

All plants listed are 1 or 2 years old.
Order as many or as few plants as you wish. All plants are nursery grown, from seeds, cuttings or budded stock except those marked with (*) which means those are collected from the wild state. All plants inspected by the Tenn. Dept. of Agriculture. This is your opportunity to buy good plants at low grower prices.

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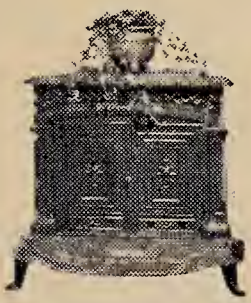

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4. WESTERN AND MOUNTAIN STATES

The times of sunrise, sunset, moonrise, moonset (pages 24–46) and the planets (page 48) are for Boston only. The table below gives the corrections to be used for both the Northern and Southern States of the Far West. Note the Key Letter for any given day (pages 24–46, 48). Then find the column below in which that Key Letter falls. The figure in that column for the city you seek is the minutes to add or subtract for that city. Example: Jan. 12, sunrise (page 24) is 7:12 A.M. Key Letter N. Key Letter N for San Francisco (last col. below) shows +9. So sunrise at San Francisco will be 7:21 A.M., PST. If a city is not listed, interpolate between nearest two cities. (Further explanations appear on pages 89 and 90.)

NORTHERN TIER

The adjusted times found for these cities will be accurate generally to within 5 min.

City	State	Latitude ° ′	Time Used	Key Letters A-D m	E-H m	I m	J-M m	N-Q m
Fresno	Cal.	36 44	PST	+33	+21	+15	+ 9	− 3
Redding	Cal.	40 30	PST	+31	+27	+25	+23	+19
Sacramento	Cal.	38 35	PST	+34	+26	+22	+18	+ 9
San Francisco incl. Oakland & San Jose	Cal.	37 47	MST	+40	+29	+25	+20	+ 9
Stockton	Cal.	37 57	MST	+35	+26	+21	+16	+ 6
Craig	Colo.	40 30	MST	+32	+28	+26	+24	+19
Denver-Boulder	Colo.	39 45	MST	+25	+19	+16	+13	+ 8
Grand Junction	Colo.	39 03	MST	+41	+33	+30	+26	+19
Pueblo	Colo.	38 16	MST	+28	+18	+14	+10	+ 1
Trinidad	Colo.	37 08	MST	+31	+19	+14	+ 8	− 3
Boise	Idaho	43 37	MST	+56	+59	+61	+62	+65
Lewiston	Idaho	46 25	PST	−12	− 1	+ 4	+ 9	+20
Pocatello	Idaho	42 55	MST	+44	+45	+45	+46	+47
Billings	Mont.	45 47	MST	+16	+25	+29	+33	+43
Butte	Mont.	46 01	MST	+32	+41	+46	+50	+60
Glasgow	Mont.	48 10	MST	0	+15	+22	+30	+46
Great Falls	Mont.	47 30	MST	+21	+34	+41	+47	+61
Helena	Mont.	46 36	MST	+27	+39	+44	+49	+61
Miles City	Mont.	46 30	MST	+ 3	+14	+19	+24	+35
Carson City-Reno	Nev.	39 31	PST	+25	+18	+15	+11	+ 5
Elko	Nev.	40 50	PST	+ 4	+ 1	− 1	− 3	− 7
Las Vegas	Nev.	36 10	PST	+16	+ 3	− 4	−10	−24
Eugene	Ore.	44 03	PST	+22	+26	+28	+30	+34
Pendleton	Ore.	45 35	PST	− 2	+ 7	+11	+15	+24
Portland	Ore.	45 31	PST	+14	+23	+26	+30	+39
Kanab	Utah	37 03	MST	+63	+52	+46	+40	+29
Moab	Utah	38 35	MST	+47	+38	+34	+30	+21
Ogden	Utah	41 14	MST	+48	+45	+44	+42	+40
Salt Lake City	Utah	40 45	MST	+49	+45	+43	+41	+38
Vernal	Utah	40 30	MST	+40	+36	+34	+32	+27
Bellingham	Wash.	48 54	PST	+ 4	+19	+26	+32	+48
Seattle-Tacoma-Olympia	Wash.	47 37	PST	+ 6	+20	+26	+32	+46
Spokane	Wash.	47 40	PST	−16	− 1	+ 5	+12	+27
Walla Walla	Wash.	46 04	PST	− 5	+ 5	+ 9	+14	+24
Casper	Wyo.	42 50	MST	+20	+21	+22	+22	+24
Cheyenne	Wyo.	41 08	MST	+17	+14	+13	+11	+ 9
Rawlins	Wyo.	41 45	MST	+27	+25	+25	+24	+23
Rock Springs	Wyo.	41 35	MST	+35	+33	+33	+32	+30
Sheridan	Wyo.	44 50	MST	+14	+20	+23	+26	+33

SOUTHERN TIER

The adjusted times found for these cities will be accurate generally to within 10 mins.

Flagstaff	Ariz.	35 08	MST	+62	+50	+42	+35	+22
Phoenix	Ariz.	33 27	MST	+69	+53	+44	+35	+19
Tucson	Ariz.	32 13	MST	+68	+50	+40	+29	+11
Yuma	Ariz.	32 40	MST	+81	+64	+54	+44	+27
Fort Smith	Ark.	35 25	CST	+54	+41	+33	+26	+13
Bakersfield	Cal.	35 30	PST	+32	+19	+12	+ 4	− 8
Barstow	Cal.	34 55	PST	+25	+12	+ 4	− 4	−18
Los Angeles incl. Pasadena & Santa Monica	Cal.	34 03	PST	+32	+17	+ 9	0	−14
San Diego	Cal.	32 43	PST	+31	+14	+ 4	− 5	−23
Albuquerque	N. M.	35 05	MST	+43	+30	+22	+15	+ 1
Gallup	N. M.	35 30	MST	+50	+38	+31	+24	+11
Las Cruces	N. M.	32 20	MST	+51	+34	+23	+12	− 5
Roswell	N. M.	33 20	MST	+39	+23	+14	+ 5	+11
Santa Fe	N. M.	35 41	MST	+39	+26	+19	+12	0
Ardmore	Okla.	34 05	CST	+67	+53	+44	+36	+21
Oklahoma City	Okla.	35 28	CST	+66	+53	+46	+38	+26
Tulsa	Okla.	36 09	CST	+58	+46	+40	+33	+21

WEATHER FORECAST — NORTHERN CALIFORNIA, OREGON, WASHINGTON

(For Nov.–Dec. 1966 and Jan.–Dec. 1967)

This forecast is based on the U.S.W.B. Station in Portland, Oregon. Only the storm dates are given; the dates between mean clear weather. Rains will be snow on mountains — and heavier north than south of Portland.

Nov. (1966): 1–7, rain 2″; 8–9, unsettled; showers .5″; 18–20, rain 2″; 27–30, pours 2.5″.

Dec. (1966): 5–7, rain 2″; 10–12, rain 2″; 15–17, rain 1″; 20–22, rain 1.5″; 29–31, rain 1″.

Jan. (1967): 4–6, snow 6″; 10–12, snow 6″; 19–24, snow flurries; 25–29, snow 6″.

Feb.: 1–3, rain 1.5″ or snow; 8–10, rain 1.5″ or snow; 15–18, rain 1″; 23–25, rain 1.5″.

Mar.: 1–3, rain 1″; 7–9, rain 1″; 13–16, rain 1″; 23–27, rain .5″.

Apr.: 1–4, rain 2″; 8–10, rain 1″; 15–16, rain .75″; 22–23, rain .25″.

May: 1–2, rain .75″; 8–10, rain .5″; 15–17, rain .5″; 21–22, rain .5″.

June: 1–4, rain .2″; 13–15, rain .2″; 20–21, rain .2″; 29–30, rain .2″.

July: 2–8, rain .4″; 16–23, rain .5″; 27–31, rain .7″.

Aug.: 3–8, rain .25″; 13–19, rain .5″; 27–31, rain .75″.

Sept.: 4–7, rain .75″; 12–15, rain .75″; 18–20, rain .25″; 24–30, rain .75″.

Oct.: 2–4, rain .5″; 17–19, rain 1″; 25–29, rain 1.5″.

Nov.: 2–4, rain 1″; 8–11, rain 2.5″; 15–17, rain 2″; 22–26, rain 1.5″; 30, rain .25″.

Dec.: 1–2, rain .75″; 7–10, rain 2″; 14–15, rain 2″ and first snow; 24–26, rain 2″, or snow 10″.

SOUTHERN CALIFORNIA, ARIZONA, NEW MEXICO, AND OKLAHOMA

These states will follow the general rain pattern of the above for the months given, but the quantity will be anywhere from 75% to 90% less . . . and marked in the Spring, Summer and Fall months more by showers from the mountains than by anything resembling steady rainfall.

THE MOUNTAIN STATES

Strangely enough, these mountain states of COLORADO, IDAHO, MONTANA, NEVADA, UTAH, and WYOMING follow the same rain and snowfall pattern that one finds in OREGON and WASHINGTON. For this forecast we are using Denver, Colorado as the U.S.W.B. base station. It is difficult to understand, with all the heavy snows one knows about at Aspen and Sun Valley, why the actual precipitation at Boise and other mountain stations is as low as it is.

Nov. (1966): 1-6, snow flurries; 19–20, rain .5″ or snow; 27–30, rain .5″ or snow.

Dec. (1966): 6–8, snow 10″; 14–17, snow 6″; 21–23, heavy snow 15″; 29–31, snow 6″.

Jan. (1967): 5–7, snow 6″; 10–12, blizzard 24″; 17–20, unsettled, rain .25″; 25–27, snow 6″.

Feb.: 1–4, snow 6″; 14–17, snow 3″; 23–25, rain or snow 6″.

Mar.: 1–2, snow 6″; 6–8, snow 10″; 13–16, blizzard 20″; 23–27, rain .25″.

Apr.: 1–2, rain .5″; 8–10, rain .5″; 15–18, rain .25″; 22–26, rain .25″.

May: 1–3, rain .15″; 8–9, rain .15″; 15–17, rain .2″; 21–25, rain .25″.

June: 2–4, rain .5″; 7–10, rain .5″; 13–15, rain .5″; 20–23, rain .1″; 29–30, rain .1″.

July: 3–5, rain .25″; 19–22, rain .5″; 27–31, rain .25″.

Aug.: 3–8, rain .25″; 13–14, rain .5″; 27–31, rain .75″.

Sept.: 4–6, rain .75″; 12–13, rain .75″; 18–19, rain .75″; 24–30, rain .75″.

Oct.: 1–4, snow, 10″; 8–14, rain .25″; 17–19, snow 10″; 25–26, snow 6″.

Nov.: 2–4, snow 10″; 8–11, snow 10″; 15–17, snow 10″; 22–23, snow 10″; 30, snow 6″.

Dec.: 1–2, snow 7″; 7–10, snow 7″; 14–18, snow 8″; 24–28, snow 10″.

1967 — THE YEAR OF THE LOCUSTS

If it be true that the Seventeen-Year Locust reappears every 17 years, Utah will be revisited by this Plague in the Summer of 1967. The grounds for such a prediction are seen not only in the traditions of the North American Indian which reported such periodical 17-year occurrences long before the arrival of the White Man, but, also, in the annals of the ancient Greek and Romans. In all such cyclical movements in Nature, however, it may be said that although such a cycle as this one may average out over the years at intervals of 17, there will be, for one reason or another, a difference of as much as one or two years on either side of the cycle. In brief, the reappearance of these locusts might well happen 16 years — or even 18 years — after the last one; but the average, over a century, would still be 17. This being the case, it is interesting to note the account of these locusts by a North Carolina man, Robert T. Thomas. (*Courtesy of Marian Bradshaw, Orem, Utah.*)

As a Mormon convert, Thomas made his way from North Carolina through hardships, Indian warfare, and personal discomfitures which are hard to believe today. Finally, in 1848, which is 119 years before 1967 and exactly divisible by 17, he had settled down on a farm near Salt Lake City. In the Spring he ploughed and planted 27 acres in corn, wheat, peas, beans, melons and squash.

"When the corn about 4 feet high, the Crickets came down from the mountains by the million and commenced eating the crops. Pereygrine Sessions, my partner, give up and was going back to S. L. C. I said: 'Why not dig a ditch around on the north and east side of the farm?' He said he would try it and we plowed a ditch around and turned water into the ditch and the water would carry them into a swamp. Them that got over the ditch Pereygrine and his father and his daughter and myself would kill with paddles.

"We keep them off for about ten days when they came so thick we dug another ditch and keep them off three weeks longer. Then Pereygrine got sick and went to S. L. C. and left me alone to fight the Crickets. The Crickets was moving West, but about nine o'clock they would commence hoppiug, eatlng everything that was green. At eleven o'clock they would crawl up on the bushes and never move until about one o'clock when they would move once more until about an hour before sunset. I would turn the water on the corn at night, shut it off in the morning and before they would begin to move again turn it into the ditches. At last they came so thick I plowed another ditch which made three, each ditch was clean full of them. I sent for Pereygrine and we went up into the mountains to see if there ever was going to be an end to them. We went and went and as far as we could see they was coming thick as ever.

"We was thousands of miles from any provision, and most of the cattle had been eat, very little provision on hand, and now to lose our crops looked like starvation. But I never give up. Then the gulls came by the millions from the West. One flock commenced at Cotton Wood and went North, and eating every cricket, never left one. In a few days they passed our field. They formed in a line across our valley, in three or four rows, flew over one and the other would sweep them clear. They would eat until their crops was filled and then heave up. These Gulls would come about nine o'clock and eat until eleven. They would go West, come back at one o'clock, and go way one hour before sunset.

"Our crop made a large yield but the people throughout the valley lost three fourths of their crops."

THE U.S. OVERLAND PACIFIC MAIL shown above was all horse and stagecoach. Some of the latter were as shown here — others were the famous "Old Concord" stages. A pioneer of the Pacific Railroad, it ran a distance of 2,729 miles between San Francisco and St. Louis. In 1859, the route was: San Francisco to Fort Tijou in the Sierra Nevada Mts. (370 mi.); to Los Angeles (94 mi.); to Tucson (560 mi.); into the Gadsden Purchase through the Messilla Valley to El Paso, to Fort Chadbourne in Texas (400 mi. including 75 mi. of desert); to Fort Smith on the Arkansas River (490 mi.). At Fort Smith, the southern mail (for Memphis) and western mail (for St. Louis) were divided. A contemporary account states "the pleasures of the road are not overwhelming as the arrangements for sleeping, eating, and drinking are of the most limited character."

THE SILVER THAW

by W. Ray Melton

Few of the Pacific Northwest's newly-arrived inhabitants or tourist visitors have ever seen one—so rare is the "silver thaw" of Western Washington and Oregon—but I venture to say that even the most blasé will be bowled over by "the wild and tender beauty" of it when they do.

All of a sudden—some morning or evening when atmospheric conditions, moisture, and temperature are just so—the landscape will be literally covered with a fantasy of cellophane wrapping, glistening like a silver anniversary party in fairyland.

Natives of the Pacific Northwest call such a unique event a "Silver Thaw." Why, it is hard to say. It actually isn't a thaw at all. It is a freeze—not of melted snow, or rain, or even fog. It is a "deluge of dew," made spectacularly beautiful by the way it puts a silvery gloss over anything and everything outdoors.

The still pictures it sketches have an almost stereopticon sense of depth and clarity . . . Electric power and telephone wires become long threads of gleaming—and often sagging—strands . . . A wire fence takes on evenly-spaced icicle pendants—a lovely informal rosary . . . Douglas fir trees in the park or government reserve stand like tall sentinels of the gods, their hoary-green silhouettes resembling pointed ice cream cones . . . Smaller shrubs and bushes blossom into veritable sunbursts of frosty glassware . . . Even the grasses and weeds hold myriad "acres of diamonds."

Streets, highways, and sidewalks are all at once possessed of a mirror-smoothness. Pedestrians walk with ludicrous care (and occasionally upend with violence). Rubber-tired vehicles spin like tops on a glass-covered table. Ice in frozen coruscations—like the patterned dents in hand-hammered silverware—spreads over headlights, fenders, and car hoods alike.

There are startling moving pictures, too: a motor car skidding to a shiny curb . . . slowly, relentlessly, its front wheels cramped in frantic, crab-like helplessness; a wrecking car—the grim outline of its derrick overlaced with an icy coating—clanking up the highway in search of tragedy, comedy, or just plain trouble; powerful trucks and buses, their exhaust pipes spewing torrents of sooty black smoke, scrambling for traction on a sanded area; street lights painting shimmering pathways of red and green on satin-smooth stretches of the pavement.

Verily, poets and painters could work wonders with the Northwest's Silver Thaw—or vice versa.

Continued from page 87

and actions, never to be depended upon; will take more pleasure in lewd love, than in that which is lawful; he will have many children, whom he will, if possible, avoid providing for during his own lifetime.

The man or woman who squints, or has his eyes turned awry, will be of a penurious disposition, but punctual in his dealings, more for the sake of gaining the character of an honest man than from any innate principle.

The color of the eye in man or woman will hold good of both. A black eye is lively, brisk and penetrating; and proves the person who possesses it to be of a sprightly wit, lively conversation, not easily imposed upon, of a sound understanding; but if taken on the weak side may be led astray for a while; his greatest foible, if it can be called one, will be the passion of love, in which he will scarcely keep bounds.

A hazle eye shews the person to be of a subtle, piercing, and frolicsome disposition, rather inclined to be arch, and something mischievous; a great joker, and will often offend his friends for the sake of a jest, but good-natured at the bottom; he will be strongly inclined to love, and not over delicate in the means of gratifying that propensity.

A blue eye shews the person to be of a meek and gentle temper, affable and good-natured, credulous and incapable of violent attachments; even modest, cool, and undisturbed by turbulent passions.

A grey eye denotes the person to be of weak intellect, devoid of wit, but a plain plodding downright drudge, that will act as he is spirited up by others; will rather submit to thau desire the pleasures of love.

A wall eye denotes the person to be of a hasty, passionate, and ungovernable temper; subject to sudden and violent anger and, in his fits, thoughtless of the mischief he may do.

A red, or as it is vulgarly called, a saucer eye, denotes the person to be selfish, deceitful, proud, furious in the passion of anger; fertile in the invention of plots, and indefatigable in resolution to bring them to bear; he is ardent in love, but strongly attached to the first object that catches his fancy; he will have many children and live to see old age.

A nose that comes even on the ridge, flat on the sides, with little or no hollow between the eyes, declares the man to be sulky, insolent, disdainful, treacherous, and self-sufficient; if it has a point descending over the nostrils, he is avaricious, and unfeeling, vainglorious, superficial, and ignorant; yet endeavoring to impose himself upon others as a man of knowledge.

A nose that rises with a sudden bulge a little below the eyes, and then falls again into a kind of hollow, below, is petulant, boorish and noisy.

The nose that is small, slender, and peaked, shews the person to be of a fearful disposition, jealous, fretful; he is lively in the pursuit of whatever he takes a liking to know, and curious.

The nose that is small, tapering, round in the nostrils, and cocked up, shews the person to be ingenious, smart, of a quick apprehension, giddy, but generous rather to a fault.

The lips that are thick, soft, and long, announce the person to be of weak intellects, credulous, and slightly peevish, but by a little soothing easily brought back to good-humor; he is strongly addicted to the pleasures of love, and scarcely moderate in his enjoyment of them.

The lips that are moderately plump and even, declare the person to be good-humored, humane, sensible, judicious and just.

The lips that are thin, shew the person to be of a quick and lively imagination.

The lips that are thin, and sunk inwards, denote the person to be of a subtle, resentful and persevering disposition; everlasting in hatred.

The chin that is round, with a hollow between it and the lip, shews the person to be of a good-humored disposition, kind and honest.

The chin that comes down flat, from the edge of the lip, and ends in a kind of chisel form, shews the person to be silly, credulous, jealous, ill-tempered, and greedy of unmerited honors and praise.

The chin that is pointed upwards, shews the person to be deeply given to contrivances, proportioned to his abilities in fortune, and understanding; however fairly he speaks to you, never depend upon his friendship, as his purpose is only to make you subservient to his own designs.

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5. SOUTHERN STATES

The times of sunrise, sunset, moonrise, moonset (pages 24–46) and the planets (page 48) are for Boston only. The table below gives the corrections to be used for anywhere in the Southern States. Note the Key Letters for any given day (pages 24–46, 48). Then find the column below in which that Key Letter falls. The figure in that column for the city you seek is the minutes to add or subtract for that city. Example: Jan. 12, sunrise (page 24) is 7:12 A.M. Key Letter N. Key Letter N for Atlanta is +29. So sunrise at Atlanta will be 7:41 A.M., EST. Accuracy will be within 15 min. for Lat. 25–30°, 10 min. for Lat. 30–35°, and 5 min. for Lat. north of 35°. If a city is not listed, interpolate between nearest two cities. (Further explanations appear on pages 89 and 90.)

City	State	Latitude ° ′	Time Used	Key Letters A-E m	F-H m	I m	J-L m	M-Q m
Birmingham	Ala.	33 31	CST	+28	+12	+ 3	− 6	−22
Decatur	Ala.	34 30	CST	+26	+12	+ 4	− 4	−19
Mobile	Ala.	30 42	CST	+39	+19	+ 8	− 4	−24
Montgomery	Ala.	32 22	CST	+29	+11	+ 1	− 9	−26
Little Rock	Ark.	34 45	CST	+47	+33	+25	+17	+ 3
Texarkana	Ark.	33 30	CST	+57	+41	+32	+23	+ 7
Jacksonville	Fla.	30 20	EST	+75	+54	+42	+30	−10
Miami	Fla.	25 47	EST	+79	+52	+37	+21	− 6
Pensacola	Fla.	30 25	EST	+97	+77	+65	+53	+33
St. Petersburg	Fla.	27 46	EST	+84	+60	+46	+32	+ 8
Tallahassee	Fla.	30 30	EST	+85	+65	+53	+41	+21
Tampa	Fla.	27 57	EST	+83	+59	+46	+32	+ 8
W. Palm Beach	Fla.	26 46	EST	+76	+50	+36	+21	− 5
Atlanta	Ga.	33 45	EST	+78	+62	+53	+44	+29
Augusta	Ga.	33 28	EST	+69	+52	+44	+35	+17
Columbus	Ga.	32 28	EST	+83	+67	+56	+44	+28
Macon	Ga.	32 50	EST	+77	+62	+50	+39	+24
Savannah	Ga.	32 05	EST	+68	+50	+40	+30	+12
Covington	Ky.	39 07	EST	+64	+57	+54	+50	+44
Lexington-Frankfort	Ky.	38 03	EST	+67	+59	+54	+50	+41
Louisville	Ky.	38 15	EST	+17	+63	+59	+54	+46
Alexandria	La.	31 16	CST	+56	+36	+26	+14	− 5
Baton Rouge	La.	30 27	CST	+53	+32	+20	+ 9	−12
Lake Charles	La.	30 15	CST	+61	+40	+28	+17	− 4
Monroe	La.	32 30	CST	+51	+34	+24	+14	− 3
New Orleans	La.	29 57	CST	+49	+28	+16	+ 4	−17
Shreveport	La.	32 31	CST	+58	+41	+31	+21	+ 3
Biloxi	Miss.	30 15	CST	+44	+23	+12	0	−20
Jackson	Miss.	32 18	CST	+44	+26	+16	+ 6	−11
Meridian	Miss.	32 28	CST	+38	+20	+11	0	−17
Tupelo	Miss.	34 18	CST	+34	+19	+10	− 2	−13
Asheville	N. C.	35 36	EST	+66	+53	+46	+39	+26
Charlotte	N. C.	35 13	EST	+60	+46	+39	+32	+18
Durham	N. C.	36 00	EST	+50	+38	+31	+25	+13
Greensboro	N. C.	36 04	EST	+53	+41	+35	+28	+16
Raleigh	N. C.	35 47	EST	+50	+37	+30	+23	+11
Wilmington	N. C.	34 12	EST	+51	+36	+27	+19	+ 4
Charleston	S. C.	32 47	EST	+62	+45	+35	+26	+ 9
Columbia	S. C.	34 00	EST	+64	+48	+40	+31	+16
Spartanburg	S. C.	34 57	EST	+65	+51	+43	+36	+22
Chattanooga	Tenn.	35 03	EST	+78	+65	+57	+49	+36
Knoxville	Tenn.	35 58	EST	+70	+58	+51	+45	+33
Memphis	Tenn.	35 09	CST	+37	+23	+16	+ 8	− 5
Nashville	Tenn.	36 10	CST	+21	+ 9	+ 3	− 4	−15
Amarillo	Tex.	35 12	CST	+84	+70	+63	+56	+42
Austin	Tex.	30 16	CST	+79	+58	+47	+35	+14
Beaumont	Tex.	30 05	CST	+65	+44	+32	+20	− 1
Corpus Christi	Tex.	27 48	CST	+83	+59	+45	+31	+ 7
Dallas-Fort Worth	Tex.	32 47	CST	+72	+55	+45	+35	+18
El Paso	Tex.	31 46	CST	+111	+92	+82	+71	+52
Galveston	Tex.	29 18	CST	+70	+48	+35	+22	0
Houston	Tex.	29 45	CST	+71	+49	+37	+25	+ 3

HURRICANE EXPECTANCY

Over a 41-year average, the statistics reveal that at sunspot maximum a Gulf of Mexico hurricane will come in just about every two years — whereas in years of sunspot minimum, once about every nine years. This year, 1967, is just after the minimum of last year. For Florida the expectancy is, for a severe storm, once every two years — for Georgia once every four.

In Texas, the expectancy is one hurricane every 1.4 years during sunspot maximums and every 9 years during minimums. The year of 1967 is approaching a maximum of sunspots towards the end of the year. It is not likely that Dallas–Fort Worth will experience the deluge of April 1966 in 1967. However, it could well be that the same sort of storm will strike in at about the same time at Oklahoma City, or possibly southern Kansas.

WEATHER FORECAST — SOUTHERN STATES

(For January–December 1967)

The forecast which follows is based, for verification purposes, at the U.S.W.B. Station at Atlanta, Georgia. It is designed to serve the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas.

There will not be, in 1967, the freezing threats experienced in the past two Winters; but there would seem to be the likelihood of a hurricane along the Florida to North Carolina Coast between September 5 and 12. Temperatures on the whole will be "normal," and precipitation figures as given are normal. Those living in other localities than Atlanta should adjust the quantities of rain to local conditions. However, this forecast should serve all states well as to the day of change from wet to dry, dry to wet, etc.

The "Winter" months of November and December 1966 will bring in storms on Nov. 2, 3, 10, 11, 19–21, 24–28, and on Dec. 2–5 (heavy rain), 7–9, 10–13 (freeze, and snow), 15–17, and 24–26.

MONTH BY MONTH

Jan.: 1–2, rain 1"; 3–5, clear; 6–8, rain 1"; 9–12, clear; 13–15, rain 1"; 16–20, unsettled; 21–22, rain 1"; 23–24, clear; 25–27, rain 2"; 28–30, clear; 31, rain begins.

Feb.: 1–2, rain 1.5"; 3–8, clear; 9–13, rain 1.5"; 14–15, clear; 16–18, rain 1.5"; 19–22, clear; 23–25, rain 1.5"; 26–28, clear.

Mar.: 1–4, rain 1"; 5–6, clear; 7–8, rain 1"; 9–14, clear; 15–18, rain 1"; 19–21, clear; 22–24, rain 1"; 25–28, clear; 29–31, rain 1".

Apr.: 1–4, rain 1"; 5–6, clear; 7–9, rain (heavy) 1.5"; 10–14, clear; 15–18, rain 1.5"; 19–20, clear; 21–30, showers, thunderstorms, rain 1.5" and possibly tornadoes.

May: 1–2, clear; 3–5, rain 1"; 6–7, clear; 8–10, rain 1"; 11–14, clear; 15–17, rain .25"; 18–19, clear; 20–22, rain (heavy) 1.25"; 23–25, clear; 26–29, rain .75"; 30–31, clear.

June: 1–3, rain .25"; 4–6, clear; 7–9, rain .25"; 10–12, clear; 13–15, rain .25"; 16–18, clear; 19–21, rain .25"; 22–26, clear; 27–28, rain .25"; 29–30, clear.

July: 1–2, rain .25"; 3–5, clear; 6–11, rain .25"; 12–16, clear; 17–21, rain .25"; 22–23, clear; 24–28, rain .25"; 29–31, clear.

Aug.: 1–4, rain .5"; 5–8, clear; 9–11, rain .25"; 12–13, clear; 14–18, rain .5"; 19–21, clear; 22–26, rain .25"; 27–31, clear.

Sept.: 1–3, rain .5"; 4–6, clear; (5–11, hurricane Florida?); 7–9, rain .5"; 10–11, clear; 12, rain .25"; 13, clear; 14–18, rain .25"; 19–20, clear; 21–22, rain .4"; 23–25, clear; 26–28, rain .6"; 29–30, clear.

Oct.: 1, rain .75"; 2–8, clear; 9–12, rain .5"; 13–15, clear; 16–18, rain .75"; 19–20, clear; 21–23, rain .5"; 24–25, clear; 26–30, rain .5"; 31, clear.

Nov.: 1–2, rain .5"; 3–5, clear; 6–9, rain .5"; 10–12, clear; 13–15, rain .75"; 16–18, clear; 19–20, rain 1"; 21–23, clear; 24–26, heavy rain 1.25"; 27–30, clear.

Dec.: 1, rain 1"; 2–3, clear; 4–5, rain 1"; 6–7, clear; 8–10, rain 1"; 11–12, clear; 13–16, rain 1"; 17–22, clear; 23–25, rain .75"; 26–29, clear; 30–31, rain .25".

THE ORIGIN OF THE SONG "DIXIE"

An interview with Daniel D. Emmett, its composer, in 1895
— by Robert Sheerin

It is a fact not widely known that the author of "Dixie" is now living in his home in Mount Vernon, Ohio. His name is Daniel D. Emmett. If he shall survive another anniversary of his birth he will round out eighty years, having been born in Mount Vernon, October 29, 1815. (Editor's note: He lived until 1904.)

Daniel Emmett's grandfather was an Irishman. He came to this country before the Revolutionary War, in which he served a regiment as surgeon and chaplain at the same time. His son, Abraham Emmett, father of Daniel, was born in Virginia, and before the War of 1812 moved to Ohio. He served in that War of 1812 under General Hull, and later as a spy upon the Indians in the northern part of Ohio. Daniel is the first of a family of four.

Mr. Emmett recently invited me to bring my violin to his home, promising to go over his old songs and tell me something of his early life. He recited numerous little anecdotes of the two Shermans (the general and the senator), who used to go to school at Gambier, near Mount Vernon. They had an uncle at the latter place whom they often visited, and here Daniel met them. He remembers particularly that in playing "shinny" the Sherman boys were never allowed to be on the same side, for they were leaders and must lead opposing forces. Mr. Emmett says it was a fashion in those days among the young people to try their skill at making verses, and sing them to some popular tune. "Jim Crow" was a favorite, and the boys and girls found great delight in fitting words to that tune. In this way he formed a taste for verse-making and singing, which later led him to Negro minstrelsy.

In 1828 he learned to play on the fiddle by ear. A short time after, he went to Cincinnati, where he engaged to play second violin with Stickney's Circus. Stickney's orchestra consisted of two violins, a bugle, and a bass drum, and in those days was counted first-class. The following spring he engaged with Miller's Caravan at Cincinnati, which had a good Eastern band. With this company he learned to play by note on the fiddle, piccolo, and fife. He was known at one time throughout the United States for his proficiency as fifer and drummer. His work with the caravan was to sing songs, chiefly darky songs, accompanied by "hoe-downs" and "walk-rounds." Mr. Emmett made his own verses and sang them to some popular tune. He traveled all over the parts of the United States then visited by minstrel troops with Dan Rice, Spaulding, Seth Howes, Dr. Leonard, Welsh and Mann, Joe Sweeney, and other noted minstrels. Everywhere he went Emmett was a favorite. His understanding and rendering of the Negro dialect were perfect.

As the venerable old man recounted to me his palmy days of minstrelsy, his eyes fairly twinkled with delight. His voice is thoroughly trained to the sweet tone of the melodious Negro's voice, and a few old Negro expressions and songs from him showed that he had not lost his old-time understanding of them. Since his time minstrelsy has undergone a change. The minstrels of that day did nothing but what the Negro could and did do. The old-time darkies were not the acrobats and circus-clowns that minstrels make themselves today, and the old-time interpretation of dialect and mannerisms was more true to life than now.

"Dixie-land," which is really the proper name of the song, was written in 1859, while the author was a member of the well-known Bryant's Minstrels, 472 Broadway, New York. His engagement with them provided that he should hold himself in readiness to compose a new "walk-round" whenever called upon to do so, and should sing the same at the close of their performance.

One Saturday night, as Mr. Emmett was proceeding homeward, he was overtaken by Jerrie Bryant, and asked to make a "hooray," and bring it to the rehearsal on Monday morning. The great objects of the "hooray" chorus were sound and noise. Mr. Emmett replied that it was a short time in which to make a good one, but he would do his best to please Mr. Bryant. He composed the walk-around the next day, and brought it to the rehearsal Monday morning, music and words completed. The tune and words of "Dixie," as now sung, are exactly as Mr. Emmett wrote them. Various aspirants for the authorship of the song in their attempts to lay claim to it have been cut short by the timely interference of friends of the composer.

The original words of "Dixie" are as follows:

DIXIE

I wish I was in de land ob cotton,
"Cimmon seed and sandy bottom,
  Look away, look away, look away, Dixie land!
In Dixie land whar I was born in,
Early on one frosty mornin',
  Look away, look away, away, Dixie land!

CHORUS.—
  Den I wish I was in Dixie, hooray, hooray!
  In Dixie's land we'll take our stand,
    To lib and die in Dixie.
  Away, away, away down south in Dixie!
  Away, away, away down south in Dixie!

Old missus marry Will de weaber,
William was a gay deceaber;
  Look away, look away, look away, Dixie land!
When he put his arm around 'er,
He look as fierce as a forty-pounder,
  Look away, look away, away, Dixie land!

His face was as sharp as a butcher's cleaber,
But dat did not seem to greab 'er;
  Look away, look away, look away, Dixie land!
Old missus acted de foolest part,
And died for a man dat broke her heart,
  Look away, look away, away, Dixie land!

Now here's health to de next old missus,
An' all de gals dat want to kiss us,
  Look away, look away, look away, Dixie land!
But if you want to drive 'way sorrow,
Come and hear dis song to-morrow,
  Look away, look away, away, Dixie land!

Dar's buckwheat-cakes an' Injun batter,
Makes you fat or a little fatter.
  Look away, look away, look away, Dixie land!
Den hoe it down an' scratch your grabble,
To Dixie's land I'm bound to trabble,
  Look away, look away, away, Dixie land!

From the time it was first sung at Bryant's Hall in New York it was a success, and it became a favorite all over the United States as fast as minstrel troops could bring it before the people.

It is interesting to know how "Dixie" became the Southern national air or war-song. Early in the war a spectacular performance was being given in New Orleans. Every part had been filled, and all that was lacking was a march and war-song for the grand chorus. A great many marches and songs were tried, but none could be decided upon until "Dixie" was suggested and tried; and all were so enthusiastic over it that it was at once adopted and given in the performance. It was taken up immediately by the populace, and was sung in the streets, and in homes and concert-halls, daily. It was taken to the battlefields, and there became the great song of the South; and made many battles harder for the Northerner, many easier for the Southerner. Though it has thus particularly endeared itself to the South, the reunion of American hearts has made it a national song. Mr. Lincoln even regarded it as national property by capture.

I asked Mr. Emmett what suggested the words and tune of "Dixie." He told me that when the cold wintry days of the North set in, all minstrels had a great desire to go south, that is to "Dixie's land." On a cold day a common saying was, "Oh, I wish I was in Dixie's land!" and this was the key to the song. The tune was composed in much the same way: one bar of music set the key for the whole.

It is interesting to note that Mr. Emmett was the originator of the first perfected minstrel troop in the United States. It was in the spring of 1843, and was called the "Virginia Minstrels." It consisted of Daniel Emmett, leader; Frank Brower, Richard Pelham, and "Billy" Whitlock. They played for six or eight weeks in New York and Boston. They then sailed for England, and traveled all over Great Britain, disbanding in Scotland. Daniel Emmett is the only one of the four now living.

"Dixie" is as lively and popular an air today as when it was written, and its reputation is not confined to the American continent. It is much played in Europe, and ranks with the finest of the simpler airs in touching the emotions of the people. Whenever it is played by a big, strong band, the auditors involuntarily keep time.

TIDE CORRECTIONS

To obtain the time and height of high water at any place, apply the differences below as they appear on pages 24–47 to the daily predictions for Boston (Commonwealth Pier). Where a value in the "height difference" column is preceded by an *, height at Boston should be multiplied by this ratio. The daily *times* of high tide at Boston are in the "Full Sea" column, pages 24–46. Daily heights are on pages 25–47.

	Time Difference h.m.	*Height Difference Ft.*
MAINE		
Augusta	+3 50	*0.4
Bangor	−0 05	+3.6
Bar Harbor	−0 33	+1.1
Boothbay Harbor	−0 20	−0.8
Eastport	−0 28	*1.9
Old Orchard	−0 10	−0.7
Portland	−0 10	−0.6
Stonington	−0 30	+0.2
NEW HAMPSHIRE		
Hampton	+0 15	−1.2
MASSACHUSETTS		
Fall River	−3 16	*0.5
Falmouth	−0 40	*0.1
Hyannisport	+0 45	*0.3
Lynn	+0 05	−0.2
Marblehead	−0 05	−0.3
Marion	−3 16	*0.4
Monument Beach	−3 06	*0.4
Nantasket	+0 10	+0.1
Nantucket	+0 50	*0.3
New Bedford	−3 21	*0.4
Oak Bluffs	+0 05	*0.2
Onset	−3 06	*0.5
Plymouth	0 00	+0.1
Provincetown	+0 15	−0.3
Scituate	−0 05	−0.5
Wellfleet	+0 20	+0.6
Woods Hole	−3 01	*0.2
RHODE ISLAND		
Block Island	−3 21	*0.3
Narragansett Pier	−3 31	*0.4
Newport	−3 31	*0.4
Providence	−3 11	*0.5
Watch Hill	−2 06	*0.3
CONNECTICUT		
Long Island Sound	−0 02	*0.7
New London	−1 47	*0.3
NEW YORK		
Coney Island	−3 00	*0.5
Long Beach	−3 57	*0.5
Long Island Sound	+0 08	*0.7
New York City	−2 50	*0.5
Ocean Beach	−3 57	*0.4
Southampton	−3 22	*0.3
NEW JERSEY		
Atlantic City	−3 57	*0.5
Bayside	−0 24	*0.6
Cape May	−3 37	*0.5
Ocean City	−3 17	*0.4
Seabright to Seaside Park	−3 44	*0.5
PENNSYLVANIA		
Philadelphia	+2 29	*0.5
DELAWARE		
Rehoboth	−3 37	*0.4
MARYLAND		
Baltimore	−4 25	*0.1
Ocean City	−3 57	*0.4
DISTRICT OF COLUMBIA		
Washington	−3 08	*0.3
VIRGINIA		
Norfolk	−1 54	*0.3
Virginia Beach	−3 14	*0.3
NORTH CAROLINA		
Beaufort	−2 59	*0.3
Carolina Beach	−3 30	*0.4
SOUTH CAROLINA		
Myrtle Beach	−3 45	*0.5
Charleston	−3 15	*0.5
GEORGIA		
St. Simon's Island	−2 51	*0.7
Savannah	−2 40	*0.8
Tybee Beach	−3 26	*0.8
FLORIDA		
Daytona	−3 20	*0.4
Fort Lauderdale	−2 15	*0.3
Jacksonville	−0 40	*0.1
Miami	−3 00	*0.3
Palm Beach	−3 20	*0.3
Port Everglades	−2 15	*0.3
St. Augustine	−2 20	*0.5
St. Petersburg	+3 58	*0.2
WASHINGTON		
Ilwaco	+1 44	−3.5
Port Townsend	+5 04	*0.5
Seattle	+5 37	−2.0
OREGON		
Astoria	+1 37	−3.3
Cape Arago	+1 19	−4.8
Yaquina Head	+1 12	−3.7
CALIFORNIA		
Catalina Island	−1 33	−5.9
Crescent City	+0 56	−5.0
Eureka	+1 20	−5.0
Long Beach	−1 37	−5.5
Monterey	−0 03	*0.4
Point Mendocino	+0 24	*0.4
San Diego	−1 35	−5.9
San Francisco	+0 59	*0.4
Santa Barbara	−1 19	−6.0
Santa Cruz	+0 08	*0.4

Example: The figures for Full Sea in Columns 10 and 11 of the left hand Almanac pages 24–46 are the times of high tide at Commonwealth Pier in Boston Harbor. The heights of these tides are given on the right hand pages 25–47. The heights are reckoned from Mean Low Water: each day has a set of figures—upper for the morning—and lower for the evening. The conversion of the times of the tides at Boston to those of Miami is given by way of illustration.

Example: Apr. 18. See page 30, column 11, for time; page 31 for height.

BOSTON		MIAMI	
High Tide (from page 30) April 18	5.45 P.M.E.S.T.	High tide (Boston)	5.45 P.M.E.S.T.
		Correction above	−3.00
		High tide (Miami)	2.45 P.M.E.S.T.
Height (from page 31)	8.1 feet	Height (Miami) (8.1 x 0.3)	2.43 feet

MOON WEATHER TABLE,

For foretelling the Weather through all the lunations of each year, forever.

This table, and the accompanying remarks, are the result of many years' actual observation, the whole being constructed on a due consideration of the attraction of the sun and moon, in their several positions respecting the earth, and will, by simple inspection, show the observer what kind of weather will most probably follow the entrance of the moon into any of its quarters, and that so near the truth as to be seldom or never found to fail.

This weather table will answer very well for anywhere in the United States. It is taken from the 1849 issue of The Old Farmer's Almanac and was widely used before the advent of the Weather Bureau. Do not be surprised if the forecasts arrived at by this table do not agree with those on Pages 19, 91, 93, 97, 103. THE OFA goes by many factors besides the moon.

WEATHER TABLE FOR ANYWHERE

Moon	Time of Change	In Summer	In Winter
If the new moon, 1st quarter, full moon, or last quarter happens.	From Midnight to 2 A.M.	Fair	Hard frost, unless wind be S. or W.
	From 2 A.M. to 4 A.M.	Cold, with frequent showers	Snow and stormy
	From 4 A.M. to 6 A.M.	Rain	Rain
	From 6 A.M. to 8 A.M.	Wind and Rain	Stormy
	From 8 A.M. to 10 A.M.	Changeable	Cold Rain if wind be W.; Snow if E.
	From 10 A.M. to Noon	Frequent Showers	Cold & high wind.
	From Noon to 2 P.M.	Very rainy	Snow or rain.
	From 2 P.M. to 4 P.M.	Changeable	Fair & mild.
	From 4 P.M. to 6 P.M.	Fair	Fair.
	From 6 P.M. to 8 P.M.	Fair — if wind N.W. Rain — if S. or S.W.	Fair & frosty if wind N. or N.E.: Rain or snow if wind S. or S.W.
	From 8 P.M. to 10 P.M.	Same as from 6 P.M. to 8 P.M.	
	From 10 P.M. to Midnight	Fair	Fair & frosty.

Observations. — 1. The nearer the moon's changes, first quarter, full, and last quarter are to *midnight*, the fairer will it be during the next seven days.

2. The space for this calculation occupies from ten at night till two next morning.

3. The nearer to *midday*, or *noon*, the phases of the moon happen, the more foul or wet weather may be expected during the next seven days.

4. The space for this calculation occupies from ten in the forenoon to two in the afternoon. These observations refer principally to the summer, though they affect spring and autumn nearly in the same ratio.

5. The moon's change, first quarter, full and last quarter, happening during six of the afternoon hours, i.e., from four to ten, may be followed by fair weather; but this is mostly dependent on the *wind*, as is noted in the table.

6. Though the weather, from a variety of irregular causes, is more uncertain in the latter part of autumn, the whole of winter, and the beginning of spring, yet, in the main, the above observations will apply to those periods also.

7. To prognosticate correctly, especially in those cases where the *wind* is concerned, the observer should be within sight of a good *vane*, where the four cardinal points of the heavens are correctly placed.

The above table was originally formed by Dr. Herschell, and is now published with some alterations founded on the experience of Dr. Adam Clarke.

TO THE WEATHER-WISE

M. Toalda of Padua (circa 1720) asserted that the weather changes most often (85.8% of the time) when the new moon comes in; 83.4% with the full, and 66.7% with the other two phase changes. Recent studies by scientists with the U.S.W.B and N.Y.U. show heaviest rainfall comes 3 to 5 days after the new and the full moons.

Many blossoms on plum trees in the Spring, heavy fruit crops in the Fall, oak (and other) leaves remaining on trees in December indicate a severe Winter is coming up. The thickness of Fall fur on most animals, goose bones, pigs' melts, distance between caterpillar stripes also are Winter predictors. Birds, particularly owls, pileated woodpeckers, and swallows are predictors — as is, of course, the woodchuck. When hornets build nests high off the ground, expect deep snows. Bees, spiders, and ants — as well as certain flowers — are useful as short-term predictors. Nature, on the whole, however, is not easily understood and birds and animals, who should know, are often as misled by her as is mankind.

THE FIRST AMERICAN WIRELESS DISTRESS CALL

The first distress call ever received by wireless was at the British South Foreland wireless station. It was a signal from the **East Goodwin Sands** lightship, which had been rammed by the **S.S. R. F. Mathews** on March 3, 1899.

The first wireless distress call from an American vessel was sent out by the Relief **Lightship 58**, while on station at Nantucket Shoals on December 10, 1905. The call used was "HELP." This was a year or more before the "SOS" or "CQD" signal became official.

The first "SOS" from an American ship was sent by Ted Haubner of the **S.S. Arapahoe**, a Clyde liner, on August 11, 1909. It was answered by the wireless station HA at Cape Hatteras. Two revenue cutters came to the rescue.

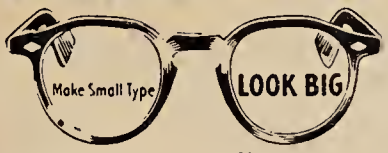
The first "CQD" was sent by Jack Binns from the **S.S. Republic** on January 23, 1909. She had been rammed in a thick fog by the Italian liner **Florida**. Jack Irwin, wireless operator at Siasconset (SC) heard the call. The publicity of this call and answer did much to establish wireless equipment on ocean-going steamers.

The operator on **Lightship 58** was W. E. Snyder, Electrician's Mate, 2nd class, U.S.N. The operator in the wireless room, at the time of this first call, of the Newport Torpedo Station at Newport, Rhode Island, was Ben J. Reynolds, Electrician's Mate, 1st Class, U.S.N. He was going off watch and before removing his headphones he had just reached down to tie a shoelace. While doing this, he heard the faint signal "HELP" from the lightship, followed by "Water gaining we are sinking." Ben received this through a sensitive electrolytic detector. This consisted of a fine platinum wire which had been made adjustable to a small cup of sulphuric acid. Ben notified the Commandant of the First Naval District, who ordered the small tender **Hist** to the rescue. However, the **Hist**, due to the high waves and storm, was unable to make it and put back into port. Ben then called the Superintendent of Lighthouses at his home in Beverly, Massachusetts. This was early Sunday morning. He in turn contacted Captain Gibbs at New Bedford. Gibbs went out in the Lighthouse tender **Azalea**. He tried to tow the sinking lightship but the tow line parted. He then lowered a boat on its lee side. His men then rowed to the lightship and rescued all the crew. She sank ten minutes later. Captain Gibbs received the Congressional Gold Medal. His first mate received a commendation. No attention was ever called to the **receiving** operator who had made this rescue possible. His name, as has been mentioned earlier, was Ben J. Reynolds of Newport, Rhode Island, the man who had been operator in charge at the Torpedo Station, Newport, Rhode Island.

Ben did receive a postcard signed by all hands rescued expressing their sincere thanks.

George H. Jette

MAGNIFYING GLASSES



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GESTATION AND REPRODUCTION TABLE

	Proper age for first mating	Period of power of reproduction in years	No. of females for one male	Period of gestation and incubation		
				Shortest days	Mean days	Longest days
Mare	3 yrs.	10 to 12		325	336	352
Stallion	4 "	12 to 15	20 to 30			
Cow	18-24 mos.	10 to 14		235	282	300
Bull	12-18 "	10 to 12	30 to 40			
Ewe	18 "	6		145	147	152
Ram	12-14 "	7	35 to 45			
Sow	9 "	6		110	114	120
Boar	9 "	6	8 to 12			
She Goat	18 "	6		147	151	155
He Goat	18 "	5	20 to 30			
Ass	3 yrs.	10 to 12		356	367	378
Jack	4 "	12 to 15	20 to 30			
She Buffalo	18-24 mos.	8		309	315	325
Bitch	16-18 "	8		58	63	67
Dog	12-16 "	8				
She Cat	12 mos.	6		58	60	64
He Cat	12 "	10	6 to 8			
Doe Rabbit	6 "	5 to 6		25	30	35
Buck Rabbit	6 "	5 to 6	30			
Cock	6 "	5 to 6	12 to 18			
Hen		5 to 6		19	21	24
Turkey				24	26	30
Duck				28	30	32
Goose				27	30	33
Pigeon				16	18	20
Pea Hen				25	28	30
Guinea Hen				20	23	25
Swan				40	42	45
Hen or Duck's Eggs				22	30	34
Robin's Eggs				13	16	19

REPRODUCTIVE CYCLE IN FARM ANIMALS

Courtesy F. N. Andrews — Purdue University

	Reoccurs if not Bred (Days)	Estrual Cycle incl. Heat Period (Days)		In Heat for		Usual Time of Ovulation
		Ave.	Range	Ave.	Range	
Mare	16	21	10–37	5–6 days	1–37 days	24–48 hours before end of estrus
Sow	19	21	18–24	2–3 days	1–5 days	Usually second day of estrus
Ewe	15	16	14–20	30 hours	20–42 hours	1 hour before end of estrus
Goat	19	20	12–25	36–48 hours	20–80 hours	Near end of estrus
Cow	20	19–20	16–24	16–20 hours	8–30 hours	14 hours after end of estrus
Bitch	180	24		21–28 days		
Cat	120			3–12 days		

STATE EXTENSION DIRECTORS

Consult these men about your garden and farm problems. They know the answers. *Courtesy Ralph M. Fulghum, Assistant Director, Division of Information, U.S. Dept. of Agriculture, Washington, D.C. 20250.* *All general correspondence is conducted by the A.D. (Associate Director).

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Alaska:	A. S. Busswell, Univ. of Alaska, College 99735.
Arizona:	G. E. Hull, Univ. of Arizona, Tucson 85721.
Arkansas:	C. A. Vines, Box 391, Little Rock 72203.
California:	G. B. Alcorn, Univ. of Cal., 2200 Univ. Ave., Berkeley 94720.
Colorado:	L. H. Watts, Colorado State U., Fort Collins 80521. *S. A. Bice (A.D.)—Same address.
Connecticut:	W. B. Young, Univ. of Connecticut, Storrs 06268. * H. M. Hansen (A.D.)—Same address.
Delaware:	S. M. Gwinn, Univ. of Delaware, Newark 19711.
Florida:	M. O. Watkins, Univ. of Florida, Gainesville 32603.
Georgia:	L. W. Eberhardt, Jr., U. of Ga., Athens 30601.
Hawaii:	C. P. Wilson, Univ. of Hawaii, Honolulu 96822.
Idaho:	J. E. Kraus, Univ. of Idaho, Moscow 83843. *C. O. Youngstrom (A.D.), 317½ N. 8th St., Boise 83701.
Illinois:	J. B. Claar, Univ. of Illinois, Urbana 61803.
Indiana:	H. G. Diesslin, Purdue University, Lafayette 47907.
Iowa:	M. A. Anderson, Iowa State University, Ames 50010.
Kansas:	H. E. Jones, Kansas State Univ., Manhattan 66504.
Kentucky:	W. A. Seay, Univ. of Kentucky, Lexington 40506. *G. W. Schneider (A.D.)—Same address.
Louisiana:	J. A. Cox, La. State U., Baton Rouge 70803.
Maine:	W. C. Libby, Univ. of Maine, Orono 04473. *E. H. Bates (A.D.)—Same address.
Maryland:	E. W. Aiton, Univ. of Maryland, College Park 20742.
Massachusetts:	A. A. Spielman, Univ. of Mass., Amherst 01003. *J. R. Beattie (A.D.)—Same address.
Michigan:	N. P. Ralston, Mich. State Univ., E. Lansing 48823.
Minnesota:	L. J. Pickrel, U. of Minn., St. Paul 55101.
Mississippi:	W. M. Bost, Miss. State Univ., State College 39762.
Missouri:	C. B. Ratchford, Univ. of Missouri, Columbia 65201.
Montana:	T. S. Aasheim, Mont. State Univ., Bozeman 59715.
Nebraska:	J. L. Adams, Univ. of Nebraska, Lincoln 68503.
Nevada:	D. W. Bohmont, Univ. of Nevada, Reno 89507. *J. F. Stein (A.D.)—Same address.
New Hampshire:	S. W. Hoitt, Univ. of N. H., Durham 03824.
New Jersey:	J. L. Gerwig, Rutgers Univ., New Brunswick 08903.
New Mexico:	P. J. Leyendecker, N. M. State U., Univ. Park 88070. *A. E. Triviz (A.D.)—Same address.
New York:	A. A. Johnson, N.Y. St. Col. of Agr., Ithaca 14850.
North Carolina:	G. Hyatt, Jr., N.C. State Univ., Raleigh 27607.
North Dakota:	A. H. Schulz, N. D. State Univ., Fargo 58103.
Ohio:	R. M. Kottman, Ohio St. Univ., 2120 Fyffe Rd., Columbus 43210.
Oklahoma:	J. C. Evans, Okla. State Univ., Stillwater 74075.
Oregon:	G. M. Lear, Oregon State Univ., Corvallis 97331.
Pennsylvania:	T. H. Patton, Penn. State U., University Park 16802.
Rhode Island:	J. W. Cobble, Univ. of R. I., Kingston 02881. *J. L. Rego (A.D.)—Same address.
South Carolina:	G. B. Nutt, Clemson Univ., Clemson 29631.
South Dakota:	J. T. Stone, S. D. State Univ., Brookings 57007.
Tennessee:	V. W. Darter, U. of Tenn., Box 1071, Knoxville 37901.
Texas:	J. E. Hutchison, Tex. A&M U., College Sta. 77841.
Utah:	W. H. Bennett, Utah State Univ., Logan 84321.
Vermont:	R. P. Davison, Univ. of Vermont, Burlington 05401.
Virginia:	W. E. Skelton, Va. Poly. Inst., Blacksburg 24061.
Washington:	J. P. Miller, Wash. State Univ., Pullman 99163.
West Virginia:	E. J. Nesius, Mineral Industries Bldg., W. Va. Univ., Morgantown 26506. *R. J. Verhaalen (A.D.), Agricultural Sciences Bldg., W. Va. Univ., Morgantown 26506.
Wisconsin:	H. L. Ahlgren, Univ. of Wis., Madison 53706.
Wyoming:	N. W. Hilston, Univ. of Wyo., Box 3354, Univ. Sta., Laramie 82071. *L. Schilt (A.D.)—Same address.

Courtesy American Automobile Association

Auto Laws

1966

State	Max. Speed Open Hwy. (R–Reasonable)	Date Regis. Expires (Incl. Grace)	Driving License Minimum Age	Gasoline Tax	Per Cent Sales Tax	Non-R. Days of Stay[1] (R–Reciprocal)	Min. Cost of Regis. (3M lbs.–100 HP)	Cost Term Driver's License	Chem. Test Law
Ala.	60–50N	11/15	16h	$.07	1½	30	$ 3.75	$4.25—2Y	B
Alaska	50	5/31	16a	.08	—	90	30.00	5.00—3Y	B
Ariz.	50–45N	12/31	18b	.07	3	180[4]	6.25	2.50—3Y	A
Ark.	60	1/31	14ac	.075	3	10[5]	12.00	2.00—1Y	A
*Cal.	65	2/4	16d	.07	3†	[3]	9.00†	3.00—3Y	B
Colo.	60	2/28	21b	.07	3	30	7.10	2.25—3Y	A
*Conn.	60	[2]	16eft	.06	3½	60	10.00	6.00—2Y	C
Del.	50	[2]	16	.07	—	90	20.00	4.00—2Y	A
*D.C.	R	3/31	16a	.06	—	RI	22.50	3.00—3Y	A
Fla.	65–55N	4/20	16ag	.07	2	R	21.72	3.00—2Y	B
*Ga.	60–50N	4/1	16h	.065	3	30	5.00†	2.50—2Y	A
Haw.	45	3/31	15i	.085–11	—	10 or[3]	15.00†	3.00	A
Ida.	60–55N	12/31	16g	.06	3	—	17.50	6.00—3Y	C
*Ill.	65	3/1	16a	.06	3½	R	22.50	3.00—3Y	A
*Ind.	65	2/28	16†	.06	2	60	12.00	1.50—2Y	A
*Iowa	70–60N	1/31	16g	.07	2	R	12.00†	5.00—2Y	C
*Kan.	70–60N	2/15	16g	.05	3	R	10.00	3.00†	C
Ky.	60–50N	3/1	16a	.07	3	R	5.00	2.00—2Y	A
La.	60	[2]	15	.07	2	R	6.00–2Y	2.50—2Y	B
Me.	45	2/28	17st	.07	4	R	15.00	5.00—2Y	A
*Md.	55	3/31	16k	.07	3	30	15.00	7.00—2Y	A
Mass.	R	12/31	16a	.065	—	R	6.00	5.00—2Y	A
*Mich.	65–55N	2/28	16afg	.06	4	90	10.50	4.50—3Y	A
*Minn.	65–55N	3/1	16ef	.06	—	R	5.25†	3.00—4Y	C
*Miss.	65	10/31	15	.07	2	30	12.00	2.50—1Y	B
*Mo.	65–60N	[2]	16j	.05	3	—	37.50	2.00—3Y	C
Mont.	R–55N	2/15	15ae	.06	1½†	90	10.00	4.00—2Y	A
*Nebr.	65–60N	2/28	16gm	.075	—	R	9.00	3.00—2Y	C
Nev.	R	12/31	16n	.06	2	[3]	5.50	3.00—5Y	A
N.H.	50	3/31	16jt	.07	—	R	15.00	10.00—2Y	C
N.J.	50	[2]	17o	.06	—	—	15.00	3.00—1Y	A
*N.M.	70–60N	3/2	18jq	.06	—	—	30.00†	3.25—2Y	B
*N.Y.	50	1/31	18bp	.06	2	R	22.50	5.00	C
*N.C.	65	2/15	16af	.07	1½	R	10.00	2.50—4Y	D
N.D.	60	12/31	16	.06	2¼	R	32.00	3.00—1Y	C
Ohio	60–50N	4/15	16e	.07	3	R	10.00	.75—3Y	B
Okla.	65–55N	3/2	16d	.065	—	60	19.50†	4.00—2Y	B
Ore.	55	[2]	16g	.06	—	[3]	10.00	3.00—2Y	C
Pa.	50	3/31	18b	.07	5	R	10.00	4.00—2Y	A
*R.I.	50–45N	3/31	16	.07	4	R	11.00	8.00—2Y	A
S.C.	55	10/31	16g	.07	3	—	4.30	2.00—4Y	A
S.D.	70–60N	3/31	16g	.06	—	60	22.00	3.00—4Y	C
*Tenn.	65–55N	3/31	16g	.07	3	30	13.25	4.00—1Y	A
Tex.	60–55N	4/1	16g	.05	2	R	11.88	3.00—2Y	B
Utah.	60–50N	2/28	17	.06	3½	—	6.00	3.00—3Y	C
*Vt.	50	2/28	18b	.065	—	R	32.00	3.00—1Y	C
*Va.	55	4/15	18ap	.07	—	60	15.00	6.00—3Y	C
*Wash.	60	1/31	16	.075	4.2	R	8.60†	4.00—2Y	A
W.Va.	55	6/30	16s	.07	3	30	20.00	5.00—4Y	A
*Wis.	65–55N	[2]	16g	.06	3	R	18.00	2.50—2Y	A
Wyo.	65	3/1	16st	.05	3	15	7.50	2.50—3Y	A

[1]Applies to non-residents. "Reciprocal" means same as home state. Those intending permanent residence must buy new plates and secure new driving license at once. Employment or placing children in public school is to reside permanently. [2]Staggered. [3]Until expiration of home registration. [4]Visitor's permit req. after 10 days. [5]Visitor's permit after 30 days.

(A). State has drunken driving test law. (B). State does not. (C). Law with imp. cons. prov. (D). Same but refusal doesn't auth. license susp.

(a) Under 18 must have consent of par or guard; (b) Jr. p'mt 16; (c) 14–16 need accompaniment by lic. op.; (d) Instruction p'mt 15½; (e) Provisional license to 21; (f) 16–18 app. must have completed driver course; (g) Jr. p'mt 14; (h) Learner's p'mt 15; (i) Under 20 need par./guard consent; (j) Jr. P'mt 15; (k) Under 21 need par./guard consent & proof of fin. responsibility; (l) Visitor's permit req. if stay exc. 14 days; (m) 14–16 accomp. by lic. driver over 21; (n) With consent of par./guard.; (o) 16 for agric. pursuits; (p) Exc. some cities; (q) Provisional lic. 16–18; (r) 15½ if drive course comp.; (s) Under 21 birth certif. or par. sig. req.; (t) Learner's permit not req.

†Plus various adj. *Seat belts req.

COME! COME! COME TO THE FAIR!

Montreal will welcome 30 million visitors to the "Universal and International Exhibition 1967" known as "Expo '67," which starts April 28, 1967 and ends October 27. No second season.

Seventy nations will display their ingenuity, imagination, and progress within the theme "Man and His World," on a man-made island in the mighty St. Lawrence River. To get there, you take roadways leading north (free service station maps are plentiful), or a Greyhound bus, or the Delaware and Hudson or New York, New Haven and Hartford Railroads, or (with smart-looking luggage) fly Air Canada, Eastern Air Lines, or Northeast Airlines.

To stay in Montreal, ask your travel agent to book a hotel or motel *now*, or write *early* to "Logexpo, Expo '67, Place Ville Marie, Montreal, Canada" for full accommodations information, including tent and trailer camps, hostels, housing in dormitories, tourist and private homes. (Note: normal room and food rates have been pegged by law!)

Within the Expo theme you'll see: a profusion of pavilions depicting "Man" as the "Creator," "Explorer," etc.; Labyrinth, a new concept in multi-screen projection; the most extensive and expensive collection of art and sculpture ever gathered under one roof; La Ronde, several "Disneylands" rolled into one; Habitat '67, an eleven-level futuristic pyramid containing 158 individual dwellings; and dozens of other attractions.

An admission "Passport" is $2.50 for adults, $1.25 for children, with substantial savings for advance purchasers (write "Expo, Montreal" for order blanks). Transportation on the site by electric express is free. (As of May 1966, American dollars bring 8% more when exchanged for Canadian!)

Alex Magelon

GLOSSARY OF ASTRONOMICAL TERMS, ETC.

Aph. — Aphelion . . . Planet revolving about Sun reaches point in its orbit farthest away from the Sun.

Apo. — Apogee . . . Moon reaches point in its orbit farthest from Earth.

Conj. — conjunction . . . moment of closest approach to each other of any two heavenly bodies.

Declination (see top left hand calendar pages) . . . measure of angular distance any celestial object lies perpendicularly north or south of celestial equator Exactly analogous to terrestrial latitude. OFA gives declination at time each day the Sun is due South.

El. — elongation . . . apparent angular distance of a member of the solar system from the Sun as seen from the Earth.

Inf. — Inferior . . . Inferior conjunction is when the Planet is between the Sun and the Earth.

Moon Runs High or Low . . . day of month Moon Souths highest or lowest above the horizon.

Occulted . . . hidden from view.

Opposition . . . time when Sun, and Moon or Planet appear on opposite sides of the sky (elongation 180 degrees).

Peri. — Perigee . . . Moon reaches point in its orbit closest to Earth.

Peri. — Perihelion . . . Planet revolving about the Sun reaches point in its orbit closest to Sun.

R.A. — Right Ascension . . . the measure Eastward along the celestial equator of any celestial body from the vernal equinox to the point where the circle which passes through the object perpendicular to the celestial equator intersects the latter.

Stat. — stationary . . . when the apparent movement of a Planet against the background of Stars stops — just before same comes to opposition.

Sunrise and **Sunset** . . . visible rising and setting of Sun's upper limb across the unobstructed horizon of an observer whose eyes are 15 feet above ground level.

Sun Fast . . . the times given in this column must be subtracted from your Sun Dial to arrive at the correct time.

Sup. — Superior . . . Superior Conjunction is when the Sun is between the Planet and the Earth.

Twilight . . . begins or ends when stars of the sixth magnitude disappear or appear at the Zenith — or the Sun is appr. 18 degrees below the horizon.

Underground Moon . . . one which changes its phases between 12 M. and 1 A.M.

ANSWERS TO CHARADES, ETC. ON PAGE 85

(1) A man cannot gather grapes from thistles. (2) A penny saved is a penny earned. (3) Owl (O + UU + L). (4) Tradewinds. (5) W HAIR over each eye (i) n gander or a bound will p over t and v ice beef hound. (Where over-reaching and error abound, will poverty be found.) (6) He is amending the public ways. (7) Mate, ate, mat, ma, am. (8) Colony. (9) Monosyllable. (10) Grate. (11) Horsemanship. (12) Short. (13) Hew hop lace S C on F I dents in awl purse ou swill short L y C on F I D E in no body. (He who places confidents in all persons will shortly confide in nobody.) (14) A ditch.

UNUSUAL FARM EXPERIENCE

Winner of the 1966 Essay Contest

Daddy was measuring the corn into the feed boxes. The farm horses heard, and, auxious for supper, milled arouud the back gate.

Our little two-year-old boy, playfully unhooked the gate! Our old pet mare put her nose in first, pushed the gate opeu, knocking the baby down. Immediately seven eager horses rushed through, but each one jumped over our baby!

Paralyzed with shock, when we could get to him, he was cryiug, not from paiu, but because the horses would uot wait for him to open the gate! A uever-to-be-forgotten experience! — *Mrs. Hazel H. Canary, Trafalgar, Ind.*

Winners of the 1966 Essay Contest (see Page 67, 1966 OFA) were Mrs. Canary (1st, $25.00); C. E. Beck, Aloha, Ore. (2nd, $15.00); C. M. Eddy, Jr., Providence, R. I. (3rd, $5.00). **For 1967, the money will go (1st, $25.00 — 2nd, $15.00 — 3rd, $5.00) for the best 100-word essay on "The Largest Vegetable We Ever Grew." Contest closes May 1, 1967.**

No entries returned; all become property of Yankee, Inc., which reserves all rights in the material submitted. Case of tie, place money lumped and divided. Staff of YANKEE, final judge. Winners announced 1968 OFA.

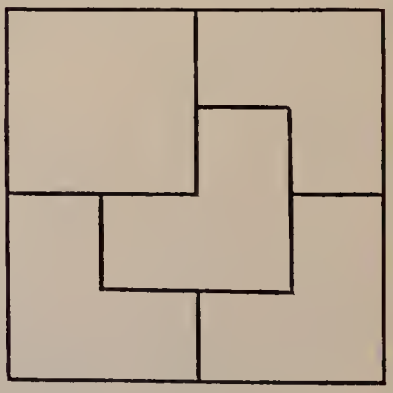
Address: Essay Contest, Yankee, Inc., Dublin, N. H. 03444.

ANSWERS TO OLD-FASHIONED PUZZLES ON PAGE 84

(1) "O, King!" explained Conrad. "Is it not clear that the six coins not tested are genuine? The counterfeit lies among the six on the pans. If heavy, it must be among the three on the left; if light, on the right. Allow me, O King, to number those on the right 1, 2, and 3, and to replace them with three of the uon-tested but patently genuine coins. If the pans now balance, the counterfeit is number 1, 2, or 3 and is light. And so I clear the pans and put number 1 on the left and number 2 on the right. If either pan goes down, the counterfeit is opposite; or, if they balance, it is number 3 If, on the other hand, when coins 1, 2, and 3 were replaced, the left pan had gone down, then the counterfeit would be amoug the three on the left, and heavy; or, if the left pan had goue up, the counterfeit would still be among the left three, but light, and in either case a final balancing of two of these, as above, would reveal the counterfeit. (Puzzle and answer courtesy of Clifford Cawley.)

(2) 22 inches (Courtesy of Edward De Respiris).

(3)



(4) Forty-four weeks.

(5):

From SIX	take IX;	left	S
From IX	take X;	left	I
From XI	take I;	left	X
			SIX

LITTLE ROBERT AND THE OWL

by Mrs. Sherwood

Woodcuts and Text from John Metcalf
Northampton, Massachusetts . . . 1836

Little Robert's father lived in a village; but his grandmother dwelt in a lone house on the top of a hill about a mile and a half from this village.

One afternoon in the month of January, Robert overheard his father saying to his mother, "Wife, I have been to see our old mother on the hill-top, and she has a bad toothache; I wish she had some of the medicine in the bottle, which did me so much good when my face was so bad."

"Indeed," said Robert's mother, "I heartily wish she had; but I know not who can be sent with it, as the boy is not come in from market, nor has Hannah yet milked the cows."

"But what should hinder me, mother, from running over with it?" said little Robert. "Late as it is, if I make haste, I may be there before it is dark; and then, mother, I can stay all night, you know, at grandmother's."

"Very well, Robert!" said his father, "you have a mind for some of your grandmother's mince pies for supper, I perceive!"

"No, father," said Robert gravely, "I was not thinking of the mince pies, but of poor grandmother's toothache; and it would give me great pleasure to take her any thing that might ease her pain."

Little Robert's mother then looking out of the window, said, "Robert, you must put on your great coat and thick shoes, for you will certainly find the snow lying deep on the hill-side; and the air is very keen." She then put on Robert's great coat, and tied his hat on with a handkerchief, because the wind blew strongly; and putting the bottle in his hand, she kissed him and said "Good night, Robert! We shall look for you in the morning by nine o'clock at furthest; so speed away my boy, and give our love to our good mother."

Little Robert hastened forward, and soon came to the place where he must leave the road and cross a stile into a meadow, which was as much as half a mile from one end to the other. This meadow was totally covered with snow; there was, however, a narrow path across it, where the snow was somewhat trodden by a few foot passengers. Robert got nimbly over the stile, and entered upon the footpath.

In the meantime Robert found himself much hindered by the snow beating in his face; and the air also grew so dark, that he began to fear being overtaken by the night, long before he could reach his grandmother's house. However he took heart, and said to himself, "Never mind, if I am in the night, grandmother will be so glad to see me! and then I hope this stuff will do her tooth good."

By this time Robert had reached the other end of the long meadow; but a greater difficulty was now before him. He had a very steep hill to ascend, and the hill was by this time covered with snow, which made it very hard indeed for any one to keep his footing upon it.

At the top of this hill was a wood, which was about half a mile long; at the other end of which stood the house of Robert's grandmother. In the summer there could not be a more delightful path than that which lay through this wood to the old lady's neat dwelling. Nearly at

the entrance of this path, which in the summer months abounded with so many delights, was a large hollow tree. By the time little Robert had reached the top of the hill, and entered the wood, the path through it was so deeply covered with snow, that every step he took plunged him almost up to his knees. In this distress he stood still, and began to consider whether it would not be best for him, instead of trying to get on to his grandmother's, which he now thought would be impossible, to look for some place of shelter near at hand, where he might remain either till the snow should cease, or till the morning light should appear.

At this moment Robert remembered the hollow tree, and tried to recollect the exact spot where it stood. After considering for an instant, he remembered that it was at the right hand of any one coming in from the hill, and a little off the pathway: so groping carefully about, he at length felt his way to this tree.

Little Robert was almost as glad when he found the hollow tree, as if he had put his hand on the door of his grandmother's house. "This tree," he said, "will afford me a comfortable dry bed till the morning"; and so saying, he pushed himself into it. The hollow part of the tree was filled at the bottom with dry leaves, affording scarcely room sufficient for Robert to sit down, with his knees up to his chin. He tucked his feet under his great coat, pulled his cuffs over his hands, and was surprised to find how warm and comfortable he was after all his fatigues. "And now," said he, "blow away, wind, as much as you please; for though you whistle and howl all the night long, you will not disturb me much in this comfortable hole. And if my grandmother had but the bottle which is in the top of my hat, all would be just as it should be."

As little Robert said these words, he was surprised by a loud hooting noise, as he thought, near to his lodging. He started, and listened again. The noise was repeated still nearer. "This is not a man's voice," said Robert, "neither can it be a wolf or a jackall: there are no such creatures hereabouts."

The little boy then looked out of his tree up to the branches of the nearest trees, among which he espied two small twinkling eyes. He was at first so frightened, that he could not prevent himself from crying out: whereupon the two eyes disappeared, while he heard a fluttering sound like that of wings. Moreover, the branches of the opposite tree were shaken, which caused the snow to fall from them in large flakes. A minute afterwards, Robert heard the same hooting which had startled him before; but at a greater distance. Little Robert considered for a moment, and then said, "Surely it is an owl which has frightened me so: and perhaps I have got his bed in this hollow tree. No wonder therefore that he stares at me with his little twinkling eyes, and fills the wood with his hooting. But by your leave, Mr. Owl, I shall keep possession of your bed-chamber this one night, whether you are pleased or not." So saying, little Robert began to laugh.

Then wrapping his great coat closer round him, and resting his head upon his knees, he began to repeat some little hymns and verses from the Bible. And while he was thinking of one passage in particular, which he remembered from the Prophet Ezekiel, he fell into a deep sleep. The verse which little Robert remembered was the 25th of the 34th chapter of Ezekiel.

I shall repeat this pretty verse for the benefit of such children as may read the story of little Robert: *And I will make with them a covenant of peace, and will cause the evil beasts to cease out of the land; and they shall dwell safely in the wilderness, and sleep in the woods.*

Little Robert's parents were rendered exceedingly uneasy by the tempestuous appearance of the night; and before sunrise in the morning, Robert's father set out for his mother's house to inquire after the boy.

As he went on horsebaek, he did not take his way across the meadow, and up the hill, and through the wood; but round about by the high road. And he knoeked at his mother's door just as Thomas the man servant was opening the kitehen window shutters.

"Thomas," said Robert's father, without getting off his horse, "what time did Robert arrive last night?"

"Master," said Thomas, "why no time; he never eame at all."

Robert's father had now dismounted, and was stepping aeross the kitehen. What a fright they were all in, when they found that the little boy had left his father's house the night before. Then Robert's father, ealling Thomas, ran out into the wood; and the old dog Faithful followed after them.

At length, on coming near the stile, whieh opened towards the hill, they distinguished the tracks of the ehild's feet, slightly covered with snow. The father eried out, when he saw these, partly in terror, and partly in joy, saying, "Follow these! follow these!" Faithful too pricked up his ears, and ran before, very aeeurately pieking out the footmarks, whieh led them round several trees, while they eontinued ealling louder and louder without receiving any answer. At length they pereeived Faithful to make a stand before the hollow tree, prieking up his ears, and wagging his tail. At this they hastened on; when the poor father, who was foremost, rushing forward, fearing to see some dreadful sight, beheld his little boy, wrapped round in his great eoat, still sleeping soundly with his head resting upon his knees.

At length, Thomas, partly from joy, and partly from wonder, broke out into a loud laugh, while Robert's father, who was a very pious man, overcome with feelings of a very different kind, burst into an involuntary flood of tears; a thing, he said, that had not happened to him since the day of Robert's birth.

"Well, now," said Thomas, "I would give forty shillings, if mistress could but see this: I am sure she would never forget it, if she were to live to be an hundred years old."

By this time Faithful had wakened Robert by jumping upon him; when the little boy, looking up, shewed a face as warm and fresh, as if he had been sleeping all night on the best bed in his grandmother's house.

"Why Robert, my boy!" said his father, "you have ehosen a eomieal kind of bed-chamber!"

"I never slept better in all my life, father," said Robert; "and I know not when I should have waked, if you had not come to call me. But now, Thomas, you must, if you please, help me to get up; for I have sat here till I doubt whether I can move a foot."

Thomas very eheerfully lent his assistance to help little Robert out of his bed-chamber, where the only ineonvenienee he had suffered, was *that* of having his knees and ankles greatly cramped, from being so long kept in so strange a posture. However, when he had stretched himself a little, he was able to walk to his grandmother's, where a good breakfast by the old lady's fireside soon put things to rights.

Little Robert always afterwards called the hollow tree his bed-chamber: and when he grew up and became a father, he used to tell his children this story with much delight; explaining to them, at the same time, what it was that made him so eontented in his hollow tree.

Postal Laws

Corrected as of April 30, 1966.

First Class Matter may be forwarded from one Postoffice to another without additional postage but other matter must have new postage.

LETTERS AND POSTAL CARDS. — FIRST CLASS.

Letters and Written and Sealed Matter, 5 cents for each ounce, local and non-local except that drop letters are subject to 4 cents for each ounce when deposited for local delivery at offices not having letter-carrier service, provided they are not collected or delivered by rural or star-route carriers.

Postcards and Private Mailing Cards (max. 4 ¼″ x 6″; min. 3″ x 4 ¼″) ..... .04

Government Postal Cards, each ..... .04

Stamped 5 cent Envelopes No. 10—$29.20, 500—$58.40, 1000.

Business Reply Cards 6 cents, Business Reply 1 oz. letters 7 cents.

NEWSPAPERS AND PERIODICALS. — SECOND CLASS.

Entire Newspapers or Magazines containing notice of second class entry when mailed by public unsealed, 4 cents for 1st two ounces, 1 cent each added 1 oz. Fourth Class Rate applies when it is lower than Second Class.

MERCHANDISE AND MISCELLANEOUS. — THIRD CLASS.

(Limit of weight up to but not including 16 ounces)

Merchandise, incomplete copies of newspapers, printed and other mailable matter unsealed, 4 cents for first two ounces, 2 cents each add'l ounce-limit 16.

Identical pieces of third-class matter may be mailed under permit in bulk lots of not less than either 50 pounds or 200 pieces, at the rate of 1S cents a pound, or fraction thereof in case of circulars, miscellaneous printed matter, and merchandise, and 12 cents a pound, or fraction thereof, in the case of books or catalogs having 24 pages or more, seeds, plants, etc., with a minimum charge of 2 ⅞c a piece in either case. Apply to postmaster for permit. The bulk mailing fee is $30 per calendar year.

Books, catalogs (must be of 24 or more pages and substantially bound, with at least 22 pages printed, seeds, cuttings, bulbs, roots, scions and plants, 2 ounces or fraction 4 cents, each added ounce 2 cents.)

Circulars and other miscellaneous printed matter, also merchandise, 4 cents for the first 2 ounces and 2 cents for each additional oz.

PARCEL POST. — FOURTH CLASS.

(16 oz. or over, incl. books, ptd. matter, except 1st class and second class papers mailed by publishers)

Catalogs and Similar Printed Advertising Matter, in bound form having 24 or more pages, weighing 16 ounces but not exceeding 10 pounds. (See Postmaster)

ZONES, Wgt. 1 lb.	Local	1st & 2nd	3rd	4th	5th	6th	7th	8th
And not over 1.5 lbs.	21c	25c	26c	28c	29c	32c	34c	38c
And not over 10 lbs.	36c	50c	56c	65c	77c	91c	1.07	1.25

Books: 10 cents for the first pound or fraction thereof and 5 cents for each additional pound or fraction thereof—24 or more pages permanently bound, not to exceed 70 lbs. Also incl. sound recordings. Also incl., when marked "Special Fourth-Class Rate," ptd. music, 16 mm. films and 16 mm. film catalogs (Exc. to commercial theatres), objective test material, sound recordings and mss. for books, periodical articles and music.

Library Books: 4 cents for the first pound or fraction thereof and 1 cent for each additional pound or fraction thereof—limit of weight 70 pounds—when sent by public libraries, organizations, or associations not organized for profit.

Weight Limits: 70 lbs. and 100 inches combined length and girth—except between 1st Class postoffices (Postmaster has list) where limits are: In zones 1 and 2, 40 lbs. with 72 inch combined length and girth, other zones 20 lbs. and 72 inch combined length and girth. Parcels over 84 but under 100 inches combined length and girth charged as 10 pounds.

Wt. 1 lb. but not over	LOCAL	1-2 Up to 150 miles	3 150 to 300 miles	4 300 to 600 miles	5 600 to 1000 miles	6 1000 to 1400 miles	1400 to 1800 miles	8 Over 1800 miles
2	$0.29	$0.40	$0.42	$0.46	$0.52	$0.59	$0.66	$0.72
3	.31	.46	.49	.55	.64	.73	.83	.93
4	.33	.51	.55	.64	.75	.88	1.01	1.13
5	.35	.57	.62	.72	.87	1.02	1.18	1.34
6	.37	.62	.68	.80	.97	1.15	1.34	1.53
7	.39	.68	.75	.88	1.07	1.28	1.50	1.73
8	.41	.73	.81	.95	1.18	1.41	1.66	1.92
9	.43	.78	.87	1.03	1.28	1.53	1.82	2.12
10	.45	.83	.93	1.10	1.38	1.66	1.98	2.31
11	.47	.88	1.00	1.18	1.48	1.78	2.14	2.48
12	.49	.93	1.06	1.26	1.58	1.90	2.29	2.66
13	.51	.98	1.12	1.33	1.69	2.02	2.44	2.83
14	.53	1.03	1.18	1.41	1.79	2.14	2.60	3.01
15	.55	1.08	1.24	1.48	1.89	2.25	2.75	3.18
16	.57	1.13	1.30	1.56	1.99	2.37	2.90	3.36
17	.59	1.18	1.36	1.64	2.09	2.49	3.06	3.53
18	.61	1.23	1.42	1.71	2.20	2.61	3.21	3.71
19	.63	1.28	1.48	1.79	2.30	2.73	3.36	3.88
20	.65	1.32	1.54	1.86	2.40	2.85	3.51	4.06
	1.24	2.53	3.00	3.84	5.03	6.26	7 84	9.22

SPECIAL CLASSES. — DOMESTIC MAIL.

Special Delivery: First Class Mail: Each piece under 2 lbs.—30c, over 2 up to 10—45c, over 10 lbs.—60c. Same for air, incl. air p.p.
Parcel Post: Up to 2 lbs.—55c; over 2 up to 10—65c; over 10 lbs.—80c.

Special Handling: Parcel Post only: Up to 2 lbs.—25c, over 2 lbs. up to 10—35c, over 10 lbs.—50c. (This service expedites mail but does not include special delivery.)

Registered Mail: Up to $100—75c; over $100 up to $200—$1.00; over $200 up to $400—$1.25; over $400 up to $600—$1.50; over $600 up to $800—$1.75; over $800 up to $1000—$2.00. There are special surcharges when declared values exceed indemnities—see local Postmaster about these.

Insured Mail: Third and Fourth Class Only: Indemnity up to $15—20c; over $15 up to $50—30c; over $50 up to $100—40c; over $100 up to $150—50c; over $150 to $200—60c.

C.O.D.: Indemnities up to $10—60c; over $10 up to $25—70c; over $25 up to $50—80c; over $50 up to $100—90c; over $100 up to $200—$1.00. Registered C.O.D., 60c fee plus registration fee based on value of article.

Money Orders: Limit for each is $100. If amount of money order is from 1c to $10 the fee is 25c, from $10.01 to $50 the fee is 35c, from $50.01 to $100 the fee is 40c.

Certified Mail: First class only having no value, add 30c to postage plus (a) 10c for return receipt showing to whom and when delivered; (b) 35c for whom, when, and address where delivered; (c) 25c for request after mailing showing to whom and when delivered. Obtain blank coupons from Postmaster.

POSTAL RATES: International

SURFACE RATES

Letters: To Canada and Mexico, 5c per oz., to all other countries, 11c for the first oz. and 7c each additional oz.

Postcards: To Canada and Mexico, 4c each; 8c reply-paid. To all other countries, 7c each, 14c reply-paid. Maximum size 6 x 4 ¼ inches, minimum size 4 ¼ x 3 inches.

Printed Matter: In general, to Canada and Mexico, 4c first 2 oz. 2c each additional oz.; all other, 5c first 2 oz. 3c each additional 2 oz. Books and sheet music, to countries of the Postal Union of the Americas and Spain, exc. Spain and Spanish possessions, 2c first 2 oz.; 1c each additional 2 oz.; all other (inc. Spain and poss.) 3c first 2 oz.; 1 ½c each additional 2 oz. Publishers' second class, P.U.A.S. countries, 2c first 2 oz., 1c each additional 2 oz., all other, 3c first 2 oz.; 1 ½c each additional 2 oz.

Samples of Merchandise: To Canada and Mexico, 4c first 2 oz.; 2c each additional oz. Minimum charge 10c. All other, 5c first 2 oz.; 3c each additional 2 oz. Minimum charge 12c.

Matter for the Blind: All countries, domestic rates apply with certain exceptions.

Small Packets: All countries, 5c each 2 oz. Minimum charge, 25c.

Merchandise Packages to Canada: Packages of 8 ounces or less, 10c for 5 oz., 12c for 6 oz., 14c for 7 oz. and 16c for 8 oz.

Registration, Insurance, Return Receipts: For detailed information concerning these services, consult your local Postmaster.

SURFACE PARCEL POST RATES

Zone **1:** N. America, C America, Caribbean Is. — 80c first 2 lbs., 30c each additional lb.

Zone **2:** All other countries — 90c first 2 lbs.; 35c each additional lb.

AIR MAIL RATES: Domestic and International

Three-zone rate structure as follows: *Zone A:* N. America, C. America, Caribbean Is.; *Zone B:* S. America, Europe (exc. USSR), Mediterranean Africa; *Zone C:* USSR, Asia, the Pacific, Africa other than Mediterranean.

Air Mail Letters: United States, Canada and Mexico, 8c per oz.; *Zone A*, 13c per half oz.; *Zone B*, 15c per half oz.; *Zone C*, 25c per half oz.

"Other Articles": United States, Canada, 8c per oz.; *Zone A*, 30c first 2 oz.; 10c each additional 2 oz.; *Zone B*, 40c first 2 oz.; 20c each additional 2 oz.; *Zone C*, 50c first 2 oz.; 30c each additional 2 oz.

Post Cards and Aerogrammes (air letter sheets): Cards, United States, Canada and Mexico, 6c each (single). All other, 11c each (single). Aerogrammes, 11c each.

Air Parcel Post: For detailed information, consult your local Postmaster.

FARM BALLADS

OVER THE HILL TO THE POOR-HOUSE.

BETSEY AND I ARE OUT.

HOW BETSEY AND I MADE UP.

By WILL CARLETON.

"These poems have been written under various, and, in some cases, difficult, conditions: in the open air, 'with team afield;' in the student's den, with ghosts of unfinished lessons hovering gloomily about; amid the rush and roar of railroad travel, which trains of thought are not prone to follow; and in the editor's sanctum, where the dainty feet of the Muses do not often deign to tread." *Harper & Bros., 1873.*

Over the Hill to the Poor-House.

Over the hill to the poor-house — I can't quite make it clear!
Over the hill to the poor-house — it seems so horrid queer!
Many a step I've taken a-toilin' to and fro,
But this is a sort of journey I never thought to go.

Over the hill to the poor-house I'm trudgin' my weary way —
I, a woman of seventy, and only a trifle gray —
I, who am smart an' chipper, for all the years I've told,
As many another woman that's only half as old.

What is the use of heapin' on me a pauper's shame?
Am I lazy or crazy? am I blind or lame?
True, I am not so supple, nor yet so awful stout;
But charity ain't no favor, if one can live without.

I am willin' and anxious an' ready any day
To work for a decent livin', an' pay my honest way;
For I can earn my victuals, an' more too, I'll be bound,
If any body only is willin' to have me round.

Once I was young an' han'some—I was, upon my soul—
Once my cheeks was roses, my eyes as black as coal;
And I can't remember, in them days, of hearin' people say,
For any kind of a reason, that I was in their way.

'Tain't no use of boastin', or talkin' over free,
But many a house an' home was open then to me;
Many a han'some offer I had from likely men,
And nobody ever hinted that I was a burden then.

And when to John I was married, sure he was good and smart,
But he and all the neighbors would own I done my part;
For life was all before me, an' I was young an' strong,
And I worked the best that I could in tryin' to get along.

And so we worked together: and life was hard, but gay,
With now and then a baby for to cheer us on our way;
Till we had half a dozen, an' all growed clean an' neat,
An' went to school like others, an' had enough to eat.

So we worked for the child'rn, and raised 'em every one;
Worked for 'em summer and winter,
just as we ought to 've done;
Only perhaps we humored 'em, which some good folks condemn,
But every couple's child'rn's a heap the best to them.

Strange how much we think of our blessed little ones!—
I'd have died for my daughters, I'd have died for my sons;
And God he made that rule of love; but when we're old
and gray,
I've noticed it sometimes somehow fails to work the other way.

Strange, another thing: when our boys an' girls was grown,
And when, exceptin' Charley, they'd left us there alone;
When John he nearer an' nearer come, an' dearer seemed to be,
The Lord of Hosts he come one day an'
took him away from me.

Still I was bound to struggle, an' never to cringe or fall—
Still I worked for Charley, for Charley was now my all;
And Charley was pretty good to me,
with scarce a word or frown,
Till at last he went a-courtin', and brought a wife from town.

She was somewhat dressy, an' hadn't a pleasant smile—
She was quite conceity, and carried a heap o' style;
But if ever I tried to be friends, I did with her, I know;
But she was hard and proud, an' I couldn't make it go.

She had an edication, an' that was good for her;
But when she twitted me on mine, 'twas carryin' things too fur;
An' I told her once, 'fore company (an' it almost made her sick),
That I never swallowed a grammar, or 'et a 'rithmetic.

So 'twas only a few days before the thing was done—
They was a family of themselves, and I another one;
And a very little cottage one family will do,
But I never have seen a house that was big enough for two.

An' I never could speak to suit her, never could please her eye,
An' it made me independent, an' then I didn't try;
But I was terribly staggered, an' felt it like a blow,
When Charley turned ag'in me, an' told me I could go.

I went to live with Susan, but Susan's house was small,
And she was always a-hintin' how snug it was for us all;
And what with her husband's sisters,
and what with child'rn three,
'Twas easy to discover that there wasn't room for me.

An' then I went to Thomas, the oldest son I've got,
For Thomas's buildings 'd cover the half of an acre lot;
But all the child'rn was on me—I couldn't stand their sauce—
And Thomas said I needn't think I was comin' there to boss.

An' then I wrote to Rebecca, my girl who lives out West,
And to Isaac, not far from her—some twenty miles at best;
And one of 'em said 'twas too warm there for any one so old,
And t'other had an opinion the climate was too cold.

So they have shirked and slighted me, an' shifted me about—
So they have well-nigh soured me, an' wore my old heart out;
But still I've borne up pretty well, an' wasn't much put down,
Till Charley went to the poor-master, an' put me on the town.

Over the hill to the poor-house—my child'rn dear, good-by!
Many a night I've watched you when only God was nigh;
And God'll judge between us; but I will al'ays pray
That you shall never suffer the half I do to-day.

Betsey and I Are Out.

Draw up the papers, lawyer, and make 'em good and stout;
For things at home are crossways, and Betsey and I are out.
We, who have worked together so long as man and wife,
Must pull in single harness for the rest of our nat'ral life.

"What is the matter?" say you. I swan it's hard to tell!
Most of the years behind us we've passed by very well;
I have no other woman, she has no other man—
Only we've lived together as long as we ever can.

So I have talked with Betsey, and Betsey has talked with me,
And so we've agreed together that we can't never agree;
Not that we've catched each other in any terrible crime;
We've been a-gathering this for years, a little at a time.

There was a stock of temper we both had for a start,
Although we never suspected 'twould take us two apart;
I had my various failings, bred in the flesh and bone;
And Betsey, like all good women, had a temper of her own.

The first thing I remember whereon we disagreed
Was something concerning heaven—a difference in our creed;
We arg'ed the thing at breakfast, we arg'ed the thing at tea,
And the more we arg'ed the question the more we didn't agree.

And the next that I remember was when we lost a cow;
She had kicked the bucket for certain,
the question was only—How?
I held my own opinion, and Betsey another had;
And when we were done a-talkin', we both of us was mad.

And the next that I remember, it started in a joke;
But full for a week it lasted, and neither of us spoke.
And the next was when I scolded because she broke a bowl,
And she said I was mean and stingy, and hadn't any soul.

And so that bowl kept pourin' dissensions in our cup;
And so that blamed cow-critter was always a-comin' up;
And so that heaven we arg'ed no nearer to us got,
But it gave us a taste of somethin' a thousand times as hot.

And so the thing kept workin', and all the self-same way;
Always somethin' to arg'e, and somethin' sharp to say;
And down on us came the neighbors, a couple dozen strong,
And lent their kindest sarvice for to help the thing along.

And there has been days together—and many a weary week—
We was both of us cross and spunky,
and both too proud to speak;
And I have been thinkin' and thinkin',
the whole of the winter and fall,
If I can't live kind with a woman, why, then, I won't at all.

And so I have talked with Betsey,
and Betsey has talked with me,
And we have agreed together that we can't never agree;
And what is hers shall be hers, and what is mine shall be mine;
And I'll put it in the agreement, and take it to her to sign.

Write on the paper, lawyer—the very first paragraph—
Of all the farm and live-stock that she shall have her half;
For she has helped to earn it, through many a weary day,
And it's nothing more than justice that Betsey has her pay.

Give her the house and homestead—a man can thrive and roam;
But women are skeery critters, unless they have a home;
And I have always determined, and never failed to say,
That Betsey never should want a home if I was taken away.

There is a little hard money that's drawin' tol'rable pay:
A couple of hundred dollars laid by for a rainy day;
Safe in the hands of good men, and easy to get at;
Put in another clause there, and give her half of that.

Yes, I see you smile, Sir, at my givin' her so much;
Yes, divorce is cheap, Sir, but I take no stock in such!
True and fair I married her, when she was blithe and young;
And Betsey was al'ays good to me, exceptin' with her tongue.

Once, when I was young as you, and not so smart, perhaps,
For me she mittened a lawyer, and several other chaps;
And all of them was flustered, and fairly taken down,
And I for a time was counted the luckiest man in town.

Once when I had a fever—I won't forget it soon—
I was hot as a basted turkey and crazy as a loon;
Never an hour went by me when she was out of sight—
She nursed me true and tender, and stuck to me day and night.

And if ever a house was tidy, and ever a kitchen clean,
Her house and kitchen was tidy as any I ever seen;
And I don't complain of Betsey, or any of her acts,
Exceptin' when we've quarreled, and told each other facts.

So draw up the paper, lawyer, and I'll go home to-night,
And read the agreement to her, and see if it's all right;
And then, in the mornin', I'll sell to a tradin' man I know,
And kiss the child that was left to us,
and out in the world I'll go.

And one thing put in the paper, that first to me didn't occur:
That when I am dead at last she'll bring me back to her;
And lay me under the maples I planted years ago,
When she and I was happy before we quarreled so.

And when she dies I wish that she would be laid by me,
And, lyin' together in silence, perhaps we will agree;
And, if ever we meet in heaven, I wouldn't think it queer
If we loved each other the better because we quarreled here.

How Betsey and I Made Up.

GIVE us your hand, Mr. Lawyer: how do you do to-day?
You drew up that paper—I s'pose you want your pay.
Don't cut down your figures; make it an X or a V;
For that 'ere written agreement was just the makin' of me.

Goin' home that evenin' I tell you I was blue,
Thinkin' of all my troubles, and what I was goin' to do;
And if my hosses hadn't been the steadiest team alive,
They'd 've tipped me over, certain,
for I couldn't see where to drive.

No—for I was laborin' under a heavy load;
No—for I was travelin' an entirely different road;
For I was a-tracin' over the path of our lives ag'in,
And seein' where we missed the way,
and where we might have been.

And many a corner we'd turned that just to a quarrel led,
When I ought to 've held my temper, and driven straight ahead:
And the more I thought it over the more these memories came,
And the more I struck the opinion that I was the most to blame.

And things I had long forgotten kept risin' in my mind,
Of little matters betwixt us, where Betsey was good and kind;
And these things flashed all through me,
as you know things sometimes will
When a feller's alone in the darkness, and every thing is still.

"But," says I, "we're too far along to take another track,
And when I put my hand to the plough I do not oft turn back;
And 'tain't an uncommon thing now for couples
to smash in two;"
And so I set my teeth together, and vowed I'd see it through.

When I come in sight o' the house 'twas some'at in the night,
And just as I turned a hill-top I see the kitchen light;
Which often a han'some pictur' to a hungry person makes,
But it don't interest a feller much that's goin' to pull up stakes.

And I crammed the agreement down my pocket
as well as I could,
And fell to eatin' my victuals, which somehow didn't taste good.
And when I went in the house the table was set for me—
As good a supper's I ever saw, or ever want to see;

And Betsey, she pretended to look
about the house,
But she watched my side coat pocket like
a cat would watch a mouse;
And then she went to foolin' a little
with her cup,
And intently readin' a newspaper,
a-holdin' it wrong side up.

And when I'd done my supper I drawed the agreement out,
And give it to her without a word, for she knowed
what 'twas about;
And then I hummed a little tune, but now and then a note
Was bu'sted by some animal that hopped up in my throat.

Then Betsey she got her specs from off the mantel-shelf,
And read the article over quite softly to herself;
Read it by little and little, for her eyes is gettin' old,
And lawyers' writin' ain't no print, especially when it's cold.

And after she'd read a little she give my arm a touch,
And kindly said she was afraid I was 'lowin' her too much;
But when she was through she went for me,
her face a-streamin' with tears,
And kissed me for the first time in over twenty years!

I don't know what you'll think, Sir—I didn't come to inquire—
But I picked up that agreement and stuffed it in the fire;
And I told her we'd bury the hatchet alongside of the cow;
And we struck an agreement never to have another row.

And I told her in the future I wouldn't speak cross or rash
If half the crockery in the house was broken all to smash;
And she said, in regards to heaven, we'd try and learn its worth
By startin' a branch establishment and runnin' it here on earth.

And so we sat a-talkin' three-quarters of the night,
And opened our hearts to each other until they both grew light;
And the days when I was winnin' her away from so many men
Was nothin' to that evenin' I courted her over again.

Next mornin' an ancient virgin took pains to call on us,
Her lamp all trimmed and a-burnin' to kindle another fuss;
But when she went to pryin' and openin' of old sores,
My Betsey rose politely, and showed her out-of-doors.

Since then I don't deny but there's been a word or two;
But we've got our eyes wide open, and know just what to do:
When one speaks cross the other just meets it with a laugh,
And the first one's ready to give up considerable more than half.

Maybe you'll think me soft, Sir, a-talkin' in this style,
But somehow it does me lots of good to tell it once in a while;
And I do it for a compliment—'tis so that you can see
That that there written agreement of yours
was just the makin' of me.

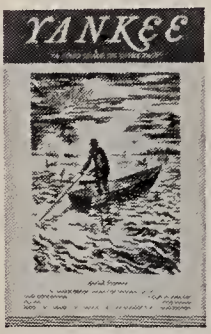
So make out your bill, Mr. Lawyer: don't stop short of an X;
Make it more if you want to, for I have got the checks.
I'm richer than a National Bank, with all its treasures told,
For I've got a wife at home now that's worth
her weight in gold.

I shall please the Lord, the giver.
I have loved because the Lord
has heard the voice of my plea.

Ideal Gifts

FOR FAMILY, FRIENDS, AND YOURSELF

Yankee Magazine



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COLOR CARDS (SEE PAGES 13-14)

Three (4¼" x 6") of each of the color reproductions on post card stock of the paintings appearing in this ALMANAC on page 14 and on the reverse side of this page — making a total of six cards — $1.00 postpaid. Seven of each — $2.00. Single cards, 20¢ each. (While they last.)

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Three copies, postpaid to individual addresses with gift card inserted, only $1.00. Six copies, $2.00.

Ten or more, same deal, only $3.00 (30¢ each).

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REGULATIONS FOR THE *Order and Discipline* OF THE TROOPS OF THE United States.

In CONGRESS, 29th March, 1779.

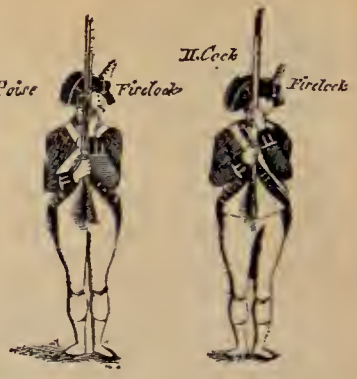
CONGRESS judging it of the greatest importance to prescribe some invariable rules for the Order and Discipline of the Troops, especially for the purpose of introducing an uniformity in their formation and manoeuvres, and in the service of the camp:

ORDERED, That the following Regulations be observed by all the Troops of the United States, and that all general and other Officers cause the same to be executed with all possible exactness.

By Order,

JOHN JAY, *President.*

Attest, CHARLES THOMPSON, *Sec'ry.*



THE MANUAL EXERCISE.

U.S. MANUAL OF ARMS, 1779

On the facing page are some 13 illustrations relating to U. S. troop regulations in the year 1779. John Jay, at this time, was President of the so-called Continental Congress — which, after the adoption of the Constitution in 1788, became the United States Congress. These regulations were drawn up by Baron Friedrich Wilhelm von Steuben (1730–94), a Prussian officer. In 1777, in Paris, this German Baron was persuaded to come to America to train our Continental Army. He served with this army at Valley Forge, rallied it to save the day at Monmouth (1778). His personal services, as well as his fortune, were devoted to the Revolutionary cause. Some years afterwards the Congress awarded him for his patriotism a pension and large land grants.

Steuben's regulations with respect to The Manual Exercise are shown herewith. Every army, as well as our own at the present time, has such Regulations. Recruits, as well as officers, are guided by it. Infractions have led not only to "kitchen police" but court martials. Regulations include not only the Manual Exercise, but all manner of formation and marching orders, firing, making camp, roll calls, guard duties, treatment of the sick, reviews, etc.

Although the inclusion of this excerpt from Steuben's Regulations may not appear to excite all of the readers of this ALMANAC, it should have special interest for the many thousands of Americans who have from time to time been subject to such Regulations. These Americans will recognize at once that the 1779 muzzle-loaded firelock perhaps served well only the soldier who managed to load his musket first.

There follow briefly excerpts from the instructions which pertain to the illustrations:

I Poise — lock to front, right hand below lock, bring firelock from shoulder to face, left hand above lock of an equal height with eyes.

II Turn barrel opposite face, thumb on cock, cock by drawing down elbow, thumb on breach pin, fingers under guard.

III Right foot back six inches, butt end against right shoulder, right eye along barrel.

IV Fire. Pull trigger briskly, bring up right foot to priming position, heels even, lock opposite right breast, muzzle high as hat, seize cock with forefinger and thumb of right hand.

V Half bend cock briskly.

VI Bring right hand to pouch, seize cartridge, bring it to mouth, bite off top down to powder, cover with thumb, bring hand as low as chin, elbow down.

VII Shake powder into pan, cover cartridge, place last three fingers behind hammer, elbow up.

VIII Shut pan briskly, bring elbow to butt, hold cartridge fast, turn piece nimbly around, lock to front, muzzle at chin height.

IX Put cartridge in muzzle, shake powder in barrel, turn stock towards you.

X Draw rammer, turn, enter into muzzle.

XI Ram cartridge down barrel, recover rammer, draw out, turn and enter as far as lower pipe.

XII Thrust rammer home, bring piece to shoulder with left hand.

XIII Bring left hand to butt, right hand to your side.

Not shown in the illustrations or excerpted here are instructions XIV–XXVII which cover order arms, grounding, taking up, shouldering, securing, shouldering, fixing bayonet, shouldering, presenting, shouldering, charge-bayonet, shouldering, advance and shouldering again. The Manual Exercise ends with an explanation of the fifteen motions used in priming and loading, of the positions of each rank when firing, and, finally how to "dress" right and left, wheel, march and halt.

It will be noted there are two qualities emphasized in Steuben's Regulations without which a Continental Soldier could hardly be: 1) "brisk" and 2) "nimble."

The first United States Militia Act was passed in Congress on May 8, 1792 at which date Robert B. Thomas was preparing the first edition (1793) of this ALMANAC.

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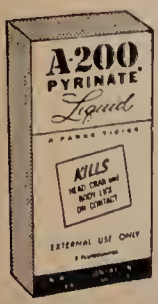

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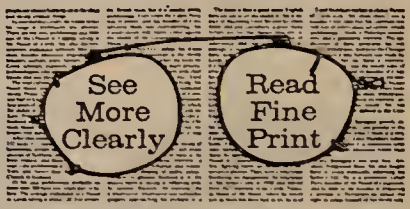

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Continued from page 10

earlier the old woodcuts which occur on the calendar pages. Originally cut by Abel Bowen for the almanac, these have been in constant use since the edition of 1809.

It was shortly after the addition of the yellow cover that Abraham Lincoln is said to have won the famous Armstrong Murder Case (August 1857) by proving from the almanac that on the night of the murder the moon was riding so low at the horizon that the prosecution was in error in trying to uphold the alleged fact that a witness had seen "by the light of the moon" the murderous blow. This is disputed by some but the fact still remains that **The Old Farmer's Almanac** was the only one of that year which stated on that day the "moon rides low."

1867.
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Few publications can produce from their files present-day letters from readers which reveal such a long and honored tradition as that held by **The Old Farmer's Almanac.**

"The OFA has been a companion for many years as I am now older than Mr. Thomas was when he died." **John A. White, Brookfield, Mass., March 22, 1945.** (Mr. White was born in the old Thomas Homestead on August 8, 1859. Mr. Thomas was 80 when he passed on.)

Continued on page 142

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Continued from page 141

"I learned to love poetry on my father's knee from **The Old Farmer's Almanac(k)**", Celia Thaxter (the famons Isles of Shoals poetess, born in 1832) stated, or words to this effect, in her diary.

"In one of my grandmother's letters written on board the clipper ship **Whirlwind** in 1852, she thanked her friends in Andover, Massachusetts, for their wonderful gift of a big carpet bag full of gifts, including the OFA. She told them **'The Old Farmer's Almanac(k)** was just what we want.'" **Martha Rice Furlong, La Jolla, Calif., Oct. 28, 1965.**

"My father was a farmer, cutting salt marsh at Hampton Falls, N. H. and as a lad I went with him and he always governed his time to cut the hay there by **The Old Farmer's Almanac.** That must have been about 1879." **Roland Sawyer, Kensington, N. H., Jan. 8, 1966.**

As to the weather, the general style of predictions (and secret formula) adopted by Mr. Thomas, with some additions and subtractions, has been carried on continnously since 1792. In 1870, when the United States Weather Bureau was established, the editors of other almanacs abandoned weather forecasting. Not so with this almanac. The accuracy of this almanac's long-range forecast has always been noted with interest. There is no other comparable long-range forecast with anywhere near its success in predicting weather trends. The U.S. W.B.'s long-range forecast **(30 days ahead)** is often less successful than the OFA's forecast **(made up 18 months ahead).** But

Continued on page 144

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Continued from page 142

the two are really not comparable. The OFA forecast today is the **only long-range forecast pinpointed to a verification spot** so that there can be little argument as to how close its forecasts come to actuality. Its five Regional Forecasts, new this year, are also similarly pinpointed at a U.S.W.B. station in each locality.

The Office of Censorship in Washington, D. C., on April 2, 1942, asked this almanac, for reasons of security, to "abandon all weather forecasting" on the grounds that "yours is honest-to-goodness forecasting done with a considerable scientific skill and some accuracy."

In recent years there have been many "direct hits" — the Worcester (Mass.) tornado in 1953; the blizzard (1952) that lost Robert Taft the New Hampshire Primary race; the big October (1954) wind in Oregon; the 1965 tornadoes at Minneapolis; the January storms of 1966; the Houston rains of last April, etc. Followers of the OFA's forecasts will tell you it is right more often than it is wrong. This is the most that can be expected of any long-range forecast. One hundred per cent accuracy is a long way off — even with satellites and computers.

Over the years since Mr. Thomas' death, there have been nine editors of this almanac: John H. Jenks, 1847–60; Charles L. Flint, 1861–69; John B. Tileston, 1870–71; Loomis J. Campbell, 1872–76; Horace E. and Robert Ware, 1877–1918; Frank B. Newton, 1919–32; Carroll J. Swan, 1933–35; Roger Scaife, 1936–40; and, since 1941, Robb Sagendorph. There have been some 21 copyright owners since 1792, the present one being Yankee, Inc., of which Robb Sagendorph is President. Provision has been made for continuing into the foreseeable future the publication of **The Old Farmer's Almanac** (see page 17).

R. S.

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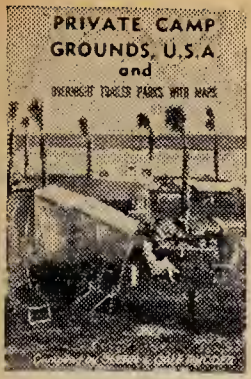

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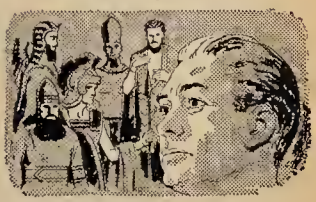

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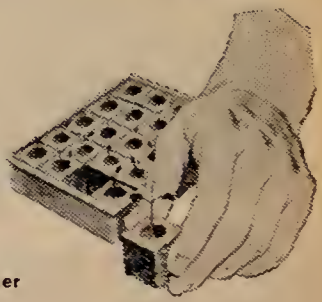

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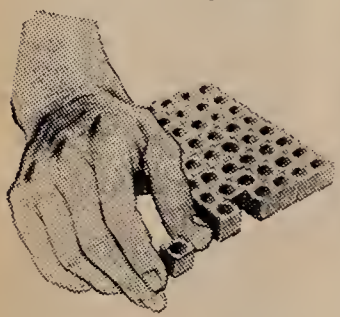

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